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Papers Relating
to the
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ECONOMIC COMMITTEE

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Papers Relating to the Temporary National Economic Committee

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THE EXTENT AND BASES OF MONOPOLY

By George J. Stigler

I shall summarize and appraise in this paper material provided by the Temporary National Economic Committee in answer to two basic questions:

1. What are the relative rôles of competition and monopoly in the American economy?
2. What are the leading bases of monopoly?

The discussion of these questions will be highly selective. Obviously no one need apologize for a lack of comprehensiveness in a discussion of approximately thirty-three thousand pages of hearings and monographs. I have gone much further and concentrated attention upon a very few topics in the conviction that an encyclopedic, running commentary would be of little value.

I—The Competitiveness of the Economy

Although several specific T.N.E.C. studies are concerned directly with measures of monopoly or concentration, and although much of the entire investigation can be viewed as an unsystematic investigation of the extent of monopoly,[1] the meaning of the search received little attention. It is not possible here to examine the problem in appropriate detail, but at least a cursory examination is in order.

We may begin by raising a point of terminology. If we mean by competition and monopoly perfect competition and perfect monopoly,[2] obviously neither has ever existed nor will either ever exist. (The frequent criticism of theoretical, and especially classical, economists that they are or were not aware of this fact reveals both a distressing ig-

[1] In the President's Message of April 29, 1938, which led to the T.N.E.C., the recommendations begin, "To meet the situation I have described, there should be a thorough study of the concentration of economic power in American industry and the effect of that concentration upon the decline of competition." (*Investigation of Concentration of Economic Power*, Hearing before Temporary National Economic Committee, December 1938, on Pub. Res. 113 (75th Cong.), Pt. 1, *Economic Prologue* [Washington, Supt. Docs., 1939], p. 189. See also Appendix A, *infra*, p. 125.) The resolution establishing the committee named as its first duty the fulfillment of this and other requests of the President (*ibid.*, p. 192; see also Appendix B, *infra*, p. 129.)

[2] The specifications of perfect competition are well known (see F. H. Knight, *Risk, Uncertainty and Profit* [London School Reprints No. 16, 1933], chaps. 1, 6; for those of perfect monopoly, see R. Triffin, *Monopolistic Competition and General Equilibrium Theory* (Harvard Press, 1940). Perfect monopoly in this sense is merely a technical method of describing a closed economy containing only one economic unit.

norance of the literature and a lack of understanding of scientific methodology.) These limiting concepts obviously cannot be used directly in an empirical study. This is apparent if one asks how our economy differs in detail from one in which entrepreneurs have complete knowledge of future prices and future technological development; no one can know the answer.

The selection of a comparative system which can be used as a frame of reference in judging our present economy will depend almost exclusively upon the purpose of our investigation. The only important purpose of such an investigation is to improve economic policy, so the comparative system should be an alternative form of economic organization which is proposed by the investigator. Historically some form of competitive enterprise economy has been the American choice of method of dealing with the economic problem. It is probably correct to say that this objective was accepted by most of the T.N.E.C. staff and by most of the witnesses, although in both cases the ambiguity of the objective contributed greatly to the wideness of its acceptance.[3] But no attempt was made to define this objective with any precision, and as a result the judgments passed on particular industries (especially in the monographs) are not comparable.

It is necessary, therefore, to replace the standard of a competitive enterprise economy by a more specific comparative system. The system here chosen may be characterized as workable competition, although "workable" is used because it has already gained some currency and not because it is believed that such competition is always practicable. It would take us far afield to defend this choice but it may be observed that, for the chief use made here of the concept, certain other systems (*e.g.*, socialism) would lead to very similar results. The following definition of workable competition is of course tentative; it is designed primarily to illustrate the type of specific criterion which is necessary to a general investigation of monopoly: "An industry is workably competitive when (1) there are a considerable number of firms selling

[3] In its final report, the T.N.E.C. "recommends the maintenance of free, competitive enterprise by the effective suppression of the restrictive practices which have always been recognized as evil." (*Final Report and Recommendations of the T.N.E.C.*, S. Doc. 35, 77th Cong., 1st sess. [Washington, Supt. Docs., 1941], p. 9.)

One example of the ambiguous use of "competition" may be cited:

"The Chairman. Then is it your advice to this committee, as a person of prominence in industry, that the competitive system should be maintained?

"Mr. Greene. I certainly think it should.

"The Chairman. Do you think it would be inadvisable for Congress, by law in any way to weaken the competitive system?

"Mr. Greene. Well, I think the freedom of business from regulation is very important, very desirable." (Hearings, Pt. 18, *Iron and Steel Industry*, p. 10280.)

closely related products in each important market area, (2) these firms are not in collusion, and (3) the long run average cost curve for a new firm is not materially higher than for an established firm."[4] It is probable that in certain cases the definition of perfect competition would have to be approximated more closely. For instance, in the retail market one might also specify that consumers have easy access to information concerning the technical properties of commodities.[5]

Three general problems may be distinguished in an empirical study of the efficiency of an economy, and all were recognized in the course of the T.N.E.C. inquiry. First, there is the question of partial equilibrium analysis: how far do the prices, outputs, investments, employment, quality of product, etc., in various selected industries differ from what they would be if the industries were workably competitive? The measurement of this discrepancy in specific industries would be a difficult task. To know price and output in an industry under workable competition, for instance, it would be necessary to know the demand curve, and the difficulties involved in statistical studies of demand, especially for nonagricultural products, are notorious. But two comments on these difficulties are in order. A reasonable approximation is all that is needed; rigorous mathematical demonstrations are simply in another universe. Moreover, if the economist cannot influence social policy by providing at least approximate quantitative results, he must resort to abstract analysis, for which there is not a wide demand, or to oratory, at which he customarily does not excel.

These comparisons of actual prices and outputs with those which would rule under workable competition would, if carried out for numerous industries, provide one important basis for the formulation of legislative policy and the administration of the antitrust laws. What is more important, they would serve as an intelligible basis for public decisions concerning economic policy. Many economists seem to enjoy emphasizing the fact that "consumers" are indifferent and unorganized (one cynic has called them the great unwashed) but few point out the fact

[4] The first two points serve to eliminate not only monopoly and explicit collusion but also tacit avoidance of price competition for fear of retaliation of close rivals. The necessary number of firms is relevant to such questions as "trust-busting," but it has no bearing on the measure of departure of an industry from workable competition. The third point excludes direct and indirect controls of entry of new firms.

[5] Professor Clair Wilcox's definition, "the availability of buyers of genuine alternatives in policy among their sources of supply" (C. Wilcox, *Competition and Monopoly in American Industry*. T.N.E.C. monog. no. 21 [Washington, Supt. Docs., 1940], p. 8), appears to be too loose; one could always use something else in place of aluminum. Professor J. M. Clark's discussion for the case of the long run harmonizes fairly well with the definition here advanced; see "Toward a Concept of Workable Competition," *Am. Econ. Rev.*, Vol. XXX (June, 1940), pp. 241-49.

that specific information which can be assimilated by the nonprofessional is rarely available in a form which bears a reasonably direct relationship to economic policy.

With respect to this objective, the T.N.E.C. rates a very low score. In only a very few cases is a specific comparison undertaken of the present facts in an industry with those which would rule under workable competition.[6] Customarily not even the most fundamental data (*e.g.*, costs) were provided. This failure is attributable, I believe, to three factors: (1) First and most important, the T.N.E.C. did not have a specific program, it did not define fundamental terms, and it did not erect precise criteria. (2) The constituency of the committee and the nature of the public hearings were ill-suited to detailed and technical discussions of this nature.[7] (3) Some of the research was conducted by agencies which yielded to the temptation to compile data "which will provide an invaluable basis for future work on this subject."

The second major problem is concerned with the much discussed question: How competitive is the economy as a whole? Despite the frequency with which dogmatic answers are given to this question, it is doubtful whether any meaningful answer is attainable. If the comparisons of actual conditions with those ruling under workable competition were carried out for all important industries, the results could scarcely be combined. In one industry the investment would be too large, in another too small; in one industry quality would be inferior, in another price too high. And waiving the difficulty of combining such diverse elements into a single index, there would remain the fact that partial equilibrium studies cannot be added together: the divergences in any one industry depend upon the extent of competition elsewhere. Aside from such weighty objections, it is difficult to find any important purpose in asking how competitive an economy is. There is some intellectual curiosity in knowing how much smaller national income is than it would be under workable competition (where practicable!), but the curiosity does not merit huge expenditures for a crude and unsatisfactory answer.

The third problem, the explanation of unemployment and the level

[6] Professor James estimates the cost to consumers of the duties and quotas on sugar and rayon at 274 million dollars and 70 million dollars per year respectively (*Industrial Concentration and Tariffs*, monog. no. 10, chap. 7). The hearings on the sulphur industry imply that the price of sulphur would be about $7.00 or $8.00 a ton, and not $18 as with the present duopoly (Hearings, Pt. 5, ***Monopolistic Practices in Industries***, pp. 1992 *ff*.). There are some relevant data in Professor Warren C. Waite's study of federal milk price fixing programs (***Economic Standards of Government Price Fixing***, monog. no. 32, pp. 87-91); and some of the testimony in the Hearings is also pertinent (Hearings, Pt. 7, ***Milk Industry; Poultry Industry***, pp. 2782 *ff*., 2831 *ff*.).

[7] See the reactions of the committee to the discussion of marginal cost curves (Hearings, Pt. 26, ***Iron and Steel Industry***).

of output of the economy, is treated at length in Dr. Abramovitz's able paper. Yet it may be permissible to reëmphasize the fact that the T.N.E.C. almost completely ignored the monopoly question at this point. Only one school of monetary theorists, the depression-minded Keynesians, were heard.[8] The discussion ran primarily in terms of the *technical* exhaustion of private investment opportunities. Virtually no attention was paid to the effects on private investment of cost-price relationships and more particularly of monopoly—a problem, incidentally, of which price flexibility is only a small part.[9] Considering the auspices under which the studies of unemployment of resources were presented, this neglect seems inexcusable.

II—Competition and Monopoly in the Economy

Three types of information are provided by the T.N.E.C. with respect to the extent of competition and monopoly in the economy. They are (1) a general survey of secondary materials, (2) large scale statistical investigations, and (3) a variety of investigations of particular industries.

In his general survey, Professor Clair Wilcox[10] classifies industries as workably competitive or monopolistic, and then divides this latter class into three groups (monopoly, oligopoly, and cartels), primarily on the basis of the form of market organization. I have already expressed the opinion that the task was well done,[11] but this type of approach is subject to two important limitations. First, as the preceding discussion argues, we do not yet possess the information to classify industries accurately as workably competitive or otherwise, and the

[8] Hearings, Pt. 9, *Savings and Investment.*

[9] The topic of monopoly received little explicit attention—none from Currie or Hansen—and no important additions were made to our theoretical or factual knowledge. On the general question, see *Saving, Investment and National Income,* monog. no. 37, p. 101; *Technology in our Economy,* monog. no. 22, Pt. II, chap. 4; on housing, see Hearings, Pt. 11, *Construction Industry; Toward More Housing,* monog no. 8, Pt. I, chap. 5; on natural gas, see *Reports of the Federal Trade Commission,* monog. no. 36, pp. 71 *ff.* Martin Taitel attempted to prove by means of a statistical study that the importance of the profit rate in investment decisions has been exaggerated. "Factors other than the amount or the rate of profit have been the major determinants of the level of capital expenditures of groups of companies. Of these other factors, the most important have been the level of output in relation to capacity and the pressure upon business for the introduction of available new technologies." (*Profits, Productive Activities and New Investment,* monog. no. 12, p. xix.) But surely technological improvements and the rate of operation are really only two of the factors affecting the profit rate, and both influence investment decisions through the profit rate. Dr. Abramovitz has pointed out that a convincing statistical demonstration of the unimportance of the profit rate would require (1) use of expected, not realized, profits, and (2) comparison between industries in which entry is easy.

[10] *Competition and Monopoly,* monog. no. 21.

[11] See my comments, this *Review,* Vol. XXXI (September, 1941), pp. 573-74.

T.N.E.C. did little to remedy this defect. Second, and more important, we do not know how far the monopolistic industries depart from workable competition. If the list of monopolistic industries expands, it is not possible to state with any assurance that the economy is less competitive.

It is worth emphasizing that a general survey in nonquantitative terms, such as Wilcox's (or Burns's), is almost certain to leave an exaggerated impression of the extent of monopolization of the economy. The competitive industries are essentially similar in their characteristics and broad patterns of behavior, so they receive brief attention in order to avoid tiresome repetition. The monopolistic industries are much more varied in their market practices, and they provide an unlimited number of examples of chicanery, exploitation, and other savory literary items. As a result the distribution of space and emphasis is always biased. Wilcox, for instance, devotes approximately equal space to the huge, competitive women's apparel industry and to beryllium, yet the sales of the latter commodity are probably less than those of any one size of cotton dress.

In *The Structure of Industry*[12] several broad statistical studies of concentration are presented. The first is a study of employment and product per establishment (plant) in manufacturing industries; the averages rose 35 and 80 per cent respectively from 1914 to 1937.[13] These averages are not sufficiently relevant to the question of the extent of competition to merit analysis here. Somewhat more pointed measures of concentration are also computed for 195 industries, on the basis of the number and proportion of plants employing half of the workers in each industry.[14] There are several difficulties in interpreting the results of this study. The data as presented do not tell us the extent of concentration in individual industries, but only changes relative to 1914. The tests of concentration are relatively crude.[15] And the Presi-

[12] Monog. no. 27.

[13] *Ibid.*, p. 4.

[14] In a given industry, let there be n plants in the base year (1914) employing $x_1, x_2, \dots, x_n$ workers in decreasing order of size; the first p plants employ half of the workers. In any given year, let there be m plants employing $y_1, y_2, \dots, y_m$ workers in decreasing order of size; the first q plants employ half of the workers (*ibid.*, pp. 54 *f.*). Then the absolute index (AI) is defined as

$$AI = p/q \times 100.$$

The relative index (RI) is defined as

$$RI = \frac{p}{n} / \frac{q}{m} \times 100.$$

Hence $AI = n/m$ RI.

[15] The following example will suffice. Let employment be the same in 1914 and 1917 in a given industry. If in 1914, 15 equal-sized plants hire half the labor and 100 plants hire the remainder, and in 1917 one plant hires 30 per cent of the labor, the next 19 plants 20 per

dent's request, to study "the effect of concentration on the decline of competition," is unfortunately ignored here as elsewhere in the monograph.

The other statistical survey measures the concentration ratios (ratio of the output of the four largest firms to United States production) for 1807 products of manufacturing industries. There is one grave defect in the statistical procedure: the ***production*** of domestic concerns is the basis of the computation. Surely the domestic consumption ***plus*** imports should have been used if the findings are to be interpreted as evidence of the extent of monopoly in the domestic economy. This oversight introduces a fairly systematic bias in the direction of exaggerating concentration.[16] Moreover, this bias is very large, as the following tentative corrections show:[17]

	Concentration Ratio	
Commodities	*Monograph No. 27*	*Revised to Include Imports*
Newsprint	68.1	15.2
Crude Glycerine	40.2	24.8
Acetic Acid	73.4	58.4
Sodium Sulphate	63.0	35.2
Tin	89.6	.4
Cigarette Paper	71.6	50.4
Burlap	39.6	23.4
Rayon Waste	70.9	32.6
Whiskey	40.0	25.1

The omission of imports is therefore sufficient, I believe, to vitiate the conclusions of the monograph.[18]

Even if concentration ratios are revised, however, they are a poor index of monopoly. They minimize the extent of monopoly control in many cases: all markets are treated as national; collusion between firms is not considered; and physically similar commodities are treated as identical. But, on the other hand, intercommodity competition is ignored, and this is an equally fatal defect. For instance, over 5 per cent of the products are in the textile group, and almost all of these have

cent, and 95 plants the remainder, the absolute index is 75 and the relative index is also 75. Yet monopoly power has very probably increased.

[16] This is obvious when the commodity is on an import basis. If the commodity is exported, on the other hand, the concentration ratio used in the monograph does not systematically understate concentration, for all companies usually are or can be in both domestic and export markets. The concentration ratio will be increased if one of the four largest firms is also a large importer (*e.g.*, copper) and it may be increased when an importer is one of the four largest "producers."

[17] The data are taken from ***Structure of Industry***, monog. no. 27, pp. 420 *ff.*, and from the *Statistical Abstract;* the year is 1937. The corrections are probably exaggerated in some cases because it is not known who the importers were.

[18] The same criticism can be made of the concentration ratios in the National Resources Committee's ***The Structure of the American Economy.***

high concentration ratios. Yet the substitution possibilities on the supply side (to say nothing of the demand side) between many of these similar products make it reasonably certain that monopolistic powers are in general small.[19] Again, the concentration ratio for motor vehicles is almost 90, but this ratio takes no cognizance of the large used-car market. It is doubtful whether the monopoly question will ever receive much illumination from large scale statistical investigations.

In addition to these broader studies, numerous monographs and most of the Hearings are devoted to specific industries and groups of industries.[20] These individual studies range in quality from the very good to the very bad, but it would be unfair to itemize the groups without a detailed justification which is beyond the limits of this paper.

III—The Economies of Large-Scale Production

Let us turn now to some of the bases of monopoly. The bases of monopoly here refer to the conditions or institutions which maintain the monopolistic situation, and not the (fairly obvious) incentives which lead to its formation. Bases for monopoly operate through either limitation of the number of firms or restriction on the market freedom of firms. The first basis to be considered is the economy of large-scale production. The incompatibility of competition and continuing economies of scale is well known;[21] here the existence of economies will be examined.

On general theoretical grounds, only two things can be said about the shape of the long-run average cost curve. First, large outputs have larger total costs than smaller outputs, so the elasticity of the average cost curve is numerically greater than one.[22] Second, long-run average

[19] For example, 16 companies make two-piece men's suits with extra knickers and the concentration ratio is 76.3, but 634 companies make men's three-piece suits (*Structure of Industry*, monog. no. 27, p. 425).

[20] On the group of agricultural industries, see monog. no. 35 (*Large-Scale Organization in the Food Industries*) and my comments, this *Review*, Vol. XXXI (September, 1941), pp. 576-77; and monog. no. 23 (*Agriculture and the National Economy*), which will be commented on below.

[21] A proof may be given. Under competition $p = k$, a constant. Long-run average costs may be denoted $\varphi(x)$, where x is output. Then total profits are

$$\pi = x(k - \varphi)$$

and for maximum profits

$$\frac{d\pi}{dx} = (k - \varphi) - x\varphi' = 0.$$

But $(k - \varphi)$ is positive and $-x\varphi'$ is also positive if there are continuing economies of scale, so the equation has no real roots; the determination of output is complex.

[22] This is sometimes proved formally: if $x_1 > x_0$ and the total cost of x_1 is less than that of x_0, one will produce x_1 even if x_0 is all that is desired and throw the remainder away. I prefer the more empirical (if less rigorous) argument that additional output must require more of some productive services and, within small variations of output, less of none.

cost must (at certain selected outputs) fall at a decreasing rate; the average cost curve is convex to the output axis.[23] Beyond this we cannot go without recourse to the facts. The T.N.E.C. provides facts of several varieties.

The first evidence is a summary by the Federal Trade Commission of the findings in 233 studies of average costs and rates of return on investment in various industries.[24] Using the cost figures, as more directly pertinent to the question of economies, in only one case of 59 did the largest or a large company have the lowest average costs and in only six cases out of 53 did the largest plant have the lowest average costs.[25] These findings are impressive, but they are subject to several important qualifications.

First, this mode of summary in terms of what size firm or plant has lowest costs or highest returns utilizes directly only one observation in each cost study. Such a summary is by no means uninformative, for if a small firm can have the lowest costs in an industry it suggests that economies of scale probably are not of great quantitative importance. But it is unsatisfactory to stop here, for there may still be large correlations between size and efficiency (as measured by average costs); the individual firm may be atypical. This is, in fact, the case in certain of the tests. As examples, the rank correlation between size of plant and efficiency for beet sugar producers is .75[26] and in milk distribution it is .58.[27] Unfortunately this type of analysis cannot be utilized in many cases because of the way in which the data are presented, but it appears that the major conclusions of the monograph would be weakened by this qualification.

Second, the cost and rate of return figures are of course suspect since they are based upon corporate accounts. The Federal Trade Commis-

[23] Although the basic phenomena are well known, they are usually not presented in this form, so a proof may be given. The economies of scale are due to indivisibilities of productive factors and processes. This is a tautology since an indivisible factor is defined as one which does not have the same long-run average cost for all sizes of factor (measured in terms of output). There are two possibilities:

1. In the trivial case where all indivisible factors are most efficiently used at the same output (*i.e.*, have the same "capacities"), average cost is equal at all multiples of this output, —there are no economies of scale as a general trend.

2. If the most efficient outputs ("capacities") vary, average cost will fall at a decreasing rate at multiples of the capacity of the smallest factor. This is true because the lowest (and then the next lowest, etc.) capacity factor will no longer contribute economies of scale. Lowest long-run average cost is of course reached when output is the lowest common multiple of all capacities.

[24] *Relative Efficiency of Large, Medium-Sized, and Small Business*, monog. no. 13.

[25] In the rate of return test the large companies made a somewhat better showing; for a tabular recapitulation see this *Review*, Vol. XXXI (September, 1941), p. 578.

[26] *Relative Efficiency*, monog. no. 13, p. 45.

[27] *Ibid.*, p. 56.

sion assures us that government accountants have reduced the figures to comparability.[28] Examination of some of the detailed reports suggests that the chief corrections are a uniform classification of costs and the elimination of intangibles from investment (and from operating charges?).[29] This is scarcely enough to guarantee comparability. Indeed the theoretical difficulties in rendering costs and investments comparable are so great that the most careful results will be only approximate. Witness the sad tale of utility valuations.

Third, the individual studies are not explored in sufficient detail to insure that the data are trustworthy clues to the shape of long-run average cost curves. The effect of the ratio of output to "capacity" is dismissed too easily.[30] Quality differences in products are not considered, and the dependence of the definition of the size of plant on the size of market area is also passed over. The quantitative differences in costs are not examined, and this is a basic defect. It does not matter much *for any purpose* what size plant or firm is most efficient if the differences are small. A few sample computations lead to the tentative conclusion that, on balance, the costs of large and small companies are fairly close and those of medium-sized plants considerably lower than either.[31]

Finally, for purposes of social policy a distinction should be drawn between technological economies and pecuniary economies. If the larger firm attains lower costs chiefly by use of its bargaining power in buying productive services and factors, the economies represent

[28] *Ibid.*, pp. 5, 11.

[29] See, as examples, *Petroleum Industry: Prices, Profits and Competition* (70th Cong., 1st sess., S. Doc. 61, 1928), pp. 266-70; *Competition and Profits in Bread and Flour* (70th Cong., 1st sess., S. Doc. 98, 1929), p. 27, chap. viii, especially p. 279. In this latter report it is shown that profits of small and closely held companies are partially included in executives' salaries, and this practice tends to exaggerate the costs of small firms (*ibid.*, pp. 309-10).

[30] It is said that some adjustments have been made (when, how?), and that this factor can be "overrated" (*Relative Efficiency*, monog. no. 13, p. 19). The figures for cement—the illustration used by the F.T.C.—show a rank correlation between operating ratios and efficiency of .47 (*ibid.*, p. 24).

[31] The following are examples taken from the monograph (the page references follow the name of the commodity or industry): P represents plants, C, companies:

Commodities	*Large*	*Medium*	*Small*	*Very Small*
P: Pig iron (p. 26)	$13.28	$12.86	$13.21	$14.03
C: Petroleum (p. 38)	1.19	.84	1.12	1.48
C: Beet sugar (p. 45)	3.57	3.86	4.47	—
C: Milk distribution (p. 56)	3.29	2.60	3.58	—
C: Evaporated milk (p. 59)	5.02	4.75	5.14	—
P: Flour (p. 60)	1.09	1.11	1.03	1.12
C: Flour (p. 65)	6.15	5.80	5.95	—

If a few of the small firms with very high costs were eliminated, the differences would be considerably smaller. Thus the five highest cost producers of beet sugar raise the average of small companies from $4.19 to $4.47.

transfers and not net social gains. It is not possible to separate these two types of economies in the F.T.C. data, or for that matter in the other cost studies here considered.[32]

A second measure of economies of scale rests on the following hypothesis: that the amount of electrical energy per man-hour in plants of various sizes is a good index of the adoption of "more modern and efficient types of technological equipment" and hence of the relative efficiencies of the various sizes of plants.[33] In each of 21 industries surveyed, the electrical energy per man-hour increased with the size of plant. The loosely formulated hypothesis scarcely carries conviction. The labor used in larger plants is probably more efficient,[34] and the products of these industries are doubtless also very heterogeneous. Nor does lower labor cost (if it is lower) per unit of output necessarily imply lower average costs for large plants.[35] The investigation may be only an illustration of the law of variable proportions.

The statistical analysis of the costs of the U. S. Steel Corporation made by Professor Yntema is the chief new material on the subject of costs in the T.N.E.C. record.[36] The cost curves derived are of a short-run nature,[37] but they cast light on the probable shape of the long-run average cost curve. The chief finding, it will be recalled, is that the total cost function of the U. S. Steel Corporation (as of 1938) was $C = \$182,000,000 + \$55.73\, Q$, where C is total cost and Q is tons of output.[38] Hence marginal costs are constant (and equal to $55.73) over an observed range from 4 to 15 million tons of output.

This finding of constancy of short-run marginal costs, which has also emerged from other costs studies, is open to a considerable number of objections which need not be examined here.[39] If we take the findings

[32] Difference in price paid for materials, for example, is due in part to the economies accruing from larger orders and shipments. Even the price-conscious steel industry, however, grants to large buyers concessions which are too large to be explained on cost grounds (Hearings, Pt. 20, *Iron and Steel Industry*, pp. 10788 *ff.*).

[33] *Technology in Our Economy*, monog. no. 22, p. 203.

[34] Large companies (and plants?) in general pay higher wages (*Hourly Earnings of Employees in Large and Small Enterprises*, monog. no. 14), and this differential is probably due in large part to the fact that large companies have more selective personnel policies.

[35] This point is also relevant to the studies of the effect of scale of operations on man-hours of labor per unit of output (*Technology in Our Economy*, monog. no. 22, pp. 200-02). The data on short-run labor inputs (*ibid.*, p. 97) are not relevant to the question of economies of scale; the validity and interpretation of these data are open to some question.

[36] Hearings, Pt. 26, *Iron and Steel Industry*.

[37] More accurately, they are a peculiar variant of the Marshallian short-run curves, for the effects of technological improvements and plant expansions are "removed" only to the extent that they manifest themselves in (linear) trends in the time series used.

[38] Hearings, Pt. 26, *Iron and Steel Industry*, p. 14034.

[39] See the testimony of Professor de Chazeau and Mr. Taitel (*ibid.*, pp. 13617 *ff.*, 13694 *ff.*); R. Ruggles, "The Concept of Linear Total Cost-Output Regressions," this

at their face value, two possible explanations seem possible. First, variations in output are effected by approximately equal changes in the employment of all factors; the coefficients of production are fixed. Second, the increase in the efficiency of utilization of fixed factors as output increases is approximately offset by decreasing efficiency of labor and other variable factors, an improbable situation.[40] If the first explanation is correct, as it undoubtedly is in many cases, then there should be few economies of scale, for expansion of plant will occur by way of adding more machines, not using larger ones.[41] These cost studies by implication support the conclusion of the F.T.C. study.

In the petroleum hearings, one witness submitted an estimate of operating costs for three sizes of modern gasoline refineries.[42] The salient figures are as follows:

Item	*Size of Refinery (barrels per day)* 5,000	15,000	60,000
Capital Investment	$2,000,000	$5,000,000	$16,000,000
Direct Operating Expense	.16	.11	.08
Total Cost of Processing a Barrel of Crude Oil	.337	.259	.201

The details of the cost analysis are unfortunately omitted,[43] so it is difficult to assess the significance of these data. Nevertheless the general method of securing costs for hypothetical plants of various sizes has several advantages over the customary statistical studies, and it is to be hoped that more such studies—with details—will become available.

The remainder of the T.N.E.C. material on costs may be passed over quickly. There are comments on the optimum size of plant in numerous industries,[44] but such observations are not very useful. The detailed evidence for the figures is not presented, and quantitative differences in

Review, Vol. XXXI (June, 1941), pp. 332-35; and my comments, this *Review*, Vol. XXX (March, 1940), pp. 401-02.

[40] If there is much specialized plant, the short-run marginal cost curve will be steep. If flexibility is built into the plant, the question turns on how the flexibility is attained. If it is secured by (*e.g.*) using numerous small machines rather than a few large ones, we are thrown back to the first explanation. See my "Production and Distribution in the Short Run," *Jour. of Pol. Economy*, Vol. XLVII (June, 1939), pp. 305-27.

[41] If the short-run marginal cost curve rises, no conclusion can be drawn respecting the shape of the long-run average cost curve.

[42] Hearings, Pt. 15, *Petroleum Industry*, pp. 8636 *ff.*, 8661 *ff.*

[43] For instance, the largest plant contains two "good-sized" combination skimming and cracking units (*ibid.*, p. 8351); in fact, each of these units "is about as large as we know how to build" (*ibid.*, p. 8352). Why are two units necessary?

[44] *E.g.*, a modern, semi-integrated steel plant costs $100,000,000 (*Technology in Our Economy*, monog. no. 22, p. 199), or anyway $40,000,000 (Hearings, Pt. 18, *Iron and Steel Industry*, p. 10410); a company producing 100,000 automobiles a year has no serious handicaps (Hearings, Pt. 21, *War and Prices*, pp. 11216 *ff.*); a distillery with a capacity of 1300 gallons a day is apparently efficient, especially on a farm (Hearings, Pt. 6, *Liquor Industry*, pp. 2543 *ff.*); etc.

costs of plants of different sizes are not considered although this is really the crucial question.

As with so many topics, therefore, the reader will find it easy to leave the T.N.E.C. publications with much the same ideas with which he approached them. With respect to economies of scale the writer has so fared: he retains the view that beyond a relatively modest scale of output the economies of large scale production are in general quantitatively unimportant.

IV—The Rôle of Government

The efforts of governments to repress competition may now be considered. The federally-financed T.N.E.C. spent considerable time on the familiar state and local restrictions on competition,[45] but passed rather quickly over the much more important part which has been and is being played by the federal government. In this essay, financed on a somewhat more modest scale by a state institution, the distribution of emphasis will be reversed and the meager contributions to the subject of federal intervention will be summarized. Seven cases will be considered.

1. Foreign trade, tariffs. Professor Cyril James instituted an investigation of the effects of tariffs on domestic competition.[46] The fundamental finding is that of 317 products whose concentration ratios (taken from monog. no. 27) exceed 75 per cent, 27.7 per cent by value would have lower prices if tariffs were reduced because "monopolistic elements" in domestic prices would be offset.[47] Unfortunately the critical information on which his results turn is not included in the monograph, so the validity of the findings cannot be assessed. It is also regrettable that products with low concentration ratios (*e.g.*, dairy products) were not included, for combinations of producers have also secured much assistance from the federal government.[48]

[45] In addition to state trade barriers (Hearings, Pt. 29. *Interstate Trade Barriers*), there is material on building codes (Hearings, Pt. 11, *Construction Industry*, pp. 5317 *ff.*), price-maintenance laws (*Problems of Small Business*, monog. no. 17, chap. 16; *Price Behavior and Business Policy*, monog. no. 1, Pt. 3; *Final Report*, pp. 141 *ff.*); milk markets (*Economic Standards of Government Price Control*, monog. no. 32, Pt. 2, chaps. 2-6); and oil conservation (*Control of the Petroleum Industry by Major Oil Companies*, monog. no. 39, chap. 3).

[46] *Industrial Concentration and Tariffs*, monog. no. 10.

[47] In a study of export policies of 76 companies, Milton Gilbert observed: "In many cases, however, approximately half in our sample, the protective tariff is of prime importance in the maintenance of a high degree of monopolistic competition or a monopoly position" (*Export Prices and Export Cartels*, monog. no. 6, p. 82).

[48] Some aspects of sugar and lumber are studied (*Industrial Concentration and Tariffs*, monog. no. 10, chaps. 6, 7).

The unsatisfactory report made by the F.T.C. on the Webb-Pomerene associations does not even allude to the possible tendency of these associations to restrict domestic competition.[49] This omission cannot be attributed to the lack of evidence of such a tendency.[50]

2. Patents. The subject of patents received a good deal of attention from the T.N.E.C., and it was the only case, so far as I know, in which at least minor legislative reforms have resulted from the work of the committee,[51] which also recommended a twenty-year limitation on patents from date of application, compulsory licensing, prohibition of restrictive licensing, and certain technical changes in administration.[52] In addition there were numerous suggestions from individuals, one of the most intriguing of which was Professor Walton Hamilton's proposal that patents of decreasing term be given for discoveries characterized by genius, professional competence, and mechanical ability.[53]

Disregarding matters of technical procedure and administration, on which I do not possess the mechanical ability to pass, two basic problems were posed: (1) the use of patents to evade the antitrust laws; and (2) the proper reward to be given to inventors. With respect to the first problem, the cartellization of the glass-container industry by the Hartford Empire Company was an eloquent example of an evil demanding correction,[54] and Professor Hamilton's useful survey of judicial decisions on this matter emphasizes the fact that the remedy must be legislative.[55] The case for limitation of restrictive licensing is surely irrefutable.

But the question of the proper reward to be given to inventors was not approached in useful terms. Almost every witness expressed his opinion as to whether patents were or were not necessary to stimulate invention, but these opinions would be of little value even if they had been uniform. (One witness seems to have summarized the prevailing attitude: "That 17 years seems to have worked out very well for a hundred years. Why change it?"[56]) The relevant question is a quantitative one: Will the social gains from a reduced patent term exceed the loss from discouragement of invention? The social gains flow from reduced monopoly: earlier use, lower prices, greater investment, etc.

[49] *Export Prices and Export Cartels (Webb-Pomerene Associations)*, monog. no. 6, Pt. 3.

[50] Hearings, Pt. 20, *Iron and Steel Industry*, pp. 10951 *ff.*; Hearings, Pt. 25, *Cartels*, pp. 13157 *f.*

[51] *Patents and Free Enterprise*, monog. no. 31, p. 146n.

[52] *Final Report*, pp. 36-37; also pp. 249-51. None of the basic proposals has been adopted.

[53] *Patents and Free Enterprises*, monog. no. 31, pp. 156-57.

[54] Hearings, Pt. 2, *Patents*.

[55] *Patents and Free Enterprise*, monog. no. 31.

[56] Hearings, Pt. 2, *Patents*, p. 322.

That a shorter term would lessen the researcher's incentive is probable (although not certain),[57] although one should keep in mind both the distinction between inventor and patentee and the possible alternative methods of stimulating technological progress.

A large part of the answer to this question, surely, would be provided by an examination of the amount of return on a selection of patents five, ten, fifteen and twenty years after the date of application, and some estimate of the gains from an earlier lapse of the patent. Similarly, the practicability of compulsory licensing might be examined through its hypothetical application to numerous patents and by consideration of detailed foreign experience with this technique.[58] As the situation now exists, each person has his own opinion, arrived at intuitively, as to the proper patent term, the feasibility of compulsory licensing, the net effects of patent pools, and similar problems. One of the most plausible of these judgments, that a seven- to ten-year patent term better combines equitable treatment of inventors, protection of society, and administrative simplicity, receives no consideration.

3. N.R.A. Even if the Blue Eagle had left no progeny, it would still be useful to view in retrospect the workings of government by trade association. Professor Clair Wilcox's concise summary of cartel-features of the codes is therefore very welcome.[59] But, of course, the progeny have been most numerous. In some cases (coal, trucking), special legislation has restored monopolistic arrangements. The more important effects, however, were to strengthen greatly the trade association movement, which had suffered reverses from 1930 to 1932,[60] and to increase the price-fixing activities of these and less formally organized groups of producers.[61] There is fragmentary evidence on the persistence of

[57] On the ground that additional rewards will not directly discourage anyone and will encourage some avaricious inventors. But the reduction of patent monopolies would lead to wider production of the patented object, and improvements or derivative ideas might emerge more rapidly.

[58] Since Mr. Coe was available, such studies should have been simple: "Mr. Coe. In the last 5 years of my service as Commissioner of Patents I have devoted myself to a careful study of almost every aspect of our patent system. This I have done not merely for my own information but with the purpose of increasing the usefulness of the system to the American people. In the course of this long and serious study I have utilized every available source of information." (Hearings, Pt. 3, *Patents,* p. 838). There is an illuminating dispute between Messrs. Coe and Arnold in Hearings, Pt. 31A, *Supplemental Data,* pp. 18467-89.

[59] See *Competition and Monopoly,* monog. no. 21, pp. 259-67; Hearings, Pt. 25, *Cartels,* pp. 13319 *ff.*; and *Final Report of the Executive Secretary,* pp. 98-101.

[60] *Trade Association Survey,* monog. no. 18, pp. 12 *ff.*, 369.

[61] In this connection it may be of interest to quote the testimony of Thurman Arnold: "May I interject this in the record with respect to the Department of Commerce report [*Trade Association Survey,* monog. no. 18], which says that trade associations are not violating the law? I don't believe that it is possible for anybody to know whether any association is violating the law or not without a grand-jury investigation. I would only say that the majority of trade associations against whom we have had substantial complaints

N.R.A. coöperation—for example, the iron ore company executives had apparently not yet heard in 1938 of the *Schechter* decision[62]—but no systematic study was made.

4. Agriculture. Of federally fostered monopolies, agriculture is surely one of the most important. The broad subject is discussed only by Dr. A. L. Meyers, and this discussion is brief and nonfactual.[63] The government program is held to be nonmonopolistic because maximum returns are not sought and because social considerations (favoring small farms, aid to sharecroppers) are given attention.[64] Surely both arguments are equally valid (or invalid) when applied to antichain store legislation, which is accorded less favorable treatment.[65] Later Dr. Meyers shifts ground and concedes that competitively-oriented criticisms of the agricultural programs are "theoretically sound," but falls back on the familiar argument that farmers must organize to combat industrial monopolies in order to receive (120 per cent of?) parity incomes.[66]

The development of federal price fixing in milk is reported in an informative, balanced essay by Professor W. C. Waite.[67] The early marketing agreements in interstate markets were dominated, and in large part administered, by local organizations of producers and distributors. Under the subsequent licensing scheme the distributors were left to care for themselves, and the interests of the producers—and, to an apparently infinitesimal extent, of consumers—became the concern of the Department of Agriculture. Certain improvements have been made in the marketing machinery,[68] but the major results have been an increase in milk prices (of 20 to 40 cents per hundredweight) and a strengthening of the powers of producer organizations, which, incidentally, possess veto powers over the Department of Agriculture's marketing orders.

5. Bituminous coal. The compulsory cartellization of the coal industry is an extremely important case of governmental intervention because of both the basic importance of the industry (which employs over half

have been found to have been violating the law, and we have collected a large number of fines against them. As to the complaints which we haven't investigated, I don't think either the Department of Commerce knows, or we know, or anybody knows" (*Final Report*, p. 305).

[62] Hearings, Pt. 18, *Iron and Steel Industry*, pp. 10298 *ff*.

[63] *Agriculture and the National Economy*, monog. no. 23.

[64] *Ibid.*, pp. 14-15.

[65] *Ibid.*, p. 27.

[66] *Ibid.*, p. 40.

[67] *Economic Standards of Government Price Control*, monog. no. 32, Pt. II, chap. 1.

[68] *Ibid.*, pp. 74, 92.

a million laborers) and its probable use as a precedent. On the one hand, minimum prices are established primarily to protect union wage rates, and on the other hand, marketing associations are exempted from the antitrust laws. Unfortunately the only T.N.E.C. study of coal is restricted primarily to technical problems of price determination under the unusually cumbersome procedures dictated by the Bituminous Coal act of 1937.[69] This study dismisses competition—in considerable part because it is not "orderly" (rigid?)—in a page,[70] and indeed the authors recommend strengthening the cartel features by introduction of production controls, compulsory marketing associations, and regulation of substitute fuels.[71] For a critical appraisal of the workings of the Bituminous Coal act, other sources must be consulted.[72]

6. Labor Unions. The delicate topic of labor organizations, it need scarcely be said, was not submitted to close scrutiny by the T.N.E.C. In this respect it is interesting to note that the Industrial Commission, working at a time (1901) when the question was somewhat less important, devoted more attention to labor than did the T.N.E.C. Hearings.[73] It is surely indisputable that New Deal encouragement has been the greatest factor in the recent ascendancy of labor unions, so it is most appropriate to discuss the effects of union policies on competition at this point. The problem can be subdivided as follows: (1) the effects of labor unions on competition among employers; (2) policies of unions in the labor markets; and (3) the direct prevention of competition by the federal government.

Information concerning the effects of unions on competition among employers is virtually nonexistent. Thurman Arnold cites a case or two where unions have suppressed small concerns to "stabilize" an industry.[74] There is also evidence of efforts of drivers' unions to prevent competition in milk marketing,[75] of the important part played by

[69] E. B. Gordon and W. Y. Webb, *Price Fixing in the Bituminous Coal Industry*, monog. no. 32, Pt. III. But consult also the sections in Professor Donald Wallace's summary (*ibid.*, Pt. IV, chaps. 6, 8, 11).

[70] *Ibid.*, p. 320.

[71] *Ibid.*, p. 328.

[72] See the excellent essay by E. V. Rostow, "Bituminous Coal and the Public Interest," *Yale Law Jour.*, Vol. 50 (February, 1941), pp. 543-94.

[73] For a summary, see M. Atkinson, "Trusts and Trade Unions," *Pol. Sci. Quart.*, Vol. XIX (1904), pp. 193-223.

[74] For evidence on the first two points of our subdivision, see his memorandum, *Final Report*, pp. 164 *ff.*; also Corwin Edwards, "Public Policy toward Restraints of Trade by Labor Unions; and Economic Appraisal," *Am. Econ. Rev.*, Suppl., Vol. XXXII (March 1942), pp. 432-48. The reactions of the American Federation of Labor and a railroad brotherhood of Arnold's statement were obvious but depressing; Corwin Edward's commentary is excellent (Hearings, Pt. 31A, *Supplemental Data*, pp. 18168-94).

[75] Hearings, Pt. 7, *Milk Industry, Poultry Industry*, pp. 2944 *ff.*, 3223 *f.*

unions in the New York poultry racket,[76] and of the enforcement of monopolistic agreements in the building industry.[77]

The marketing policies of labor unions also receive practically no consideration. Trifling attention is paid to rackets—the Chicago (!) witness who used this word was reprimanded by members of the T.N.E.C.[78] But what is more important, the effects of wage rates, hours, and output policies of unions on prices, investments, and employment were not explored. The one monograph dealing with this subject is concerned only with the situation in individual firms, and questions of general effects or policies are not raised.[79] In the study of bituminous coal pricing the problem is dismissed as follows: "Fears have been expressed that the public has no protection, under such a plan [of legally enforceable minimum prices], against excessive wage scales which under favorable conditions might conceivably [*sic!*] be forced through perfectly legal negotiations. These authors can hardly picture labor forcing unreasonable wage levels upon an industry whose prices would shoot upward, when as a result the industry upon which they depend for their livelihood would be faced by probable losses of tonnage and employment because more consumers would be driven to lower-priced competing fuels."[80] Aside from the observable falsity of this attitude, it might be useful to mention that the "reasonableness" of a wage structure should be judged in terms of economic effects as well as in terms of the niceness of everyone receiving good incomes.

The final point, positive intervention in labor markets by the government, is completely omitted. There is no reference of importance to the Fair Labor Standards act or to the Walsh-Healey act.

7. War. Although the T.N.E.C. lasted more than fifteen months after the outbreak of the European war and held a set of hearings on *War and Prices*,[81] the effects of war on competition were not considered. Nevertheless, the current interest in the topic is sufficient to justify a few comments. It is certain that competition diminishes sharply during a major war, and it is probable that competition does not regain its former position after the demobilization. The following are a few bases for this generalization.

First, those in charge of procurement, rationing, and price fixing find it much easier to deal with associations of producers than individually with numerous small producers, so organizations of producers are

[76] *Ibid.*, pp. 2869 *ff*.

[77] Hearings, Pt. 11, *Construction Industry*, pp. 5007 *ff*.; *Toward More Housing*, monog. no. 8, pp. 54 *f*., 134.

[78] Hearings, Pt. 11, *Construction Industry*, pp. 5247 *ff*.

[79] *Industrial Wage Rates, Labor Costs and Price Policies*, monog. no. 5.

[80] *Economic Standards of Government Price Control*, monog. no. 32, p. 327.

[81] Hearings, Pt. 21, *War and Prices*.

fostered. During World War I the number of trade associations increased greatly.[82] There is likely to be virtual suspension of antitrust laws in the ubiquitous defense industries.[83]

Second, small concerns are less likely to secure war orders because of inadequate information of government needs, aversion of procurement officials to dealing with small orders, and resistance of large companies (for a variety of reasons) to subcontracting. Moreover, in the great flood of administrative decisions (*e.g.*, the granting of 75,000 priority ratings a month) the small concern, lacking a skilled representative or "influence," will not always fare so well. The situation is pithily described before the Truman Committee Hearings by Senator Connally: "You say anything to the Army and Navy about powder and the first thing they say is 'du Pont. We will get du Pont to do that.' "[84]

Third, the production of civilian goods may be concentrated in a few plants for a variety of reasons, not all of which are convincing. The British have already employed this method extensively, especially in the textile industry,[85] and certain characteristics of the scheme have already been introduced in the United States.[86]

[82] *Trade Association Survey,* monog. no. 18, p. 369.

[83] The signs already point in this direction. For example, the antitrust suit against the leading oil companies which was announced July 27, 1940, was immediately referred to the National Defense Advisory Commission, apparently at the latter's request. The commission reported unfavorably on the most important part of the government's suit, the attempt to divorce ownership of transportation facilities. The reason given by the commission, and (perforce) accepted by Attorney General Jackson, was that outside capital was unwilling to take over the pipe lines (which earned only 10 to 30 per cent on investment, depending upon the investment figures used). At the time it was also argued by many that new pipe lines construction, later prohibited by S.P.A.B., would be discouraged. (See *New York Times,* July 27, August 1, September 29, 1940.) Since the above was written, it has become the explicit policy of the Administration to suspend antitrust prosecutions when, in the opinion of the Secretary of War or the Secretary of the Navy, such prosecution would impair war production. (See *New York Times,* March 29, 1942.)

[84] *Investigation of the National Defense Program,* Hearing before Truman Committee, Pt. 6, 77th Cong., 1st sess. [Washington, Supt. Docs., 1942], pp. 1639-40. This volume contains illuminating testimony of several small producers. See also the Truman Committee's *Report Concerning Priorities and the Utilization of Existing Manufacturing Facilites,* Pt. 3, 77th Cong., 1st sess., S. Rept. 480.

[85] See "Concentration of Industry" and "Methods of Concentration," *Economist,* March 8 and April 5, 1941. For a summary of the Board of Trade's very confused explanation of the policy, see "British Concentration of Production," *Foreign Commerce Weekly,* June 14, 1941. One purpose of the policy, to make more efficient use of resources even in the short run, may be commented upon. Let $g(x_1)$ and $f(x_2)$ be the total cost functions of two plants. Then for minimum costs of production for any output $k = x_1 + x_2$, $g(x_1) + f(x_2) = g(x_1) + f(k - x_1)$ must be a minimum, i.e., $g'(x_1) = f'(x_2)$,—marginal cost should be equal in the two plants. The sufficiency condition is

$$g''(x_1) + f''(x_2) > 0.$$

From this condition it appears that in only two cases is it more efficient to concentrate production in one plant: (i) when both plants have falling marginal cost curves, and (ii) when the marginal cost curve of one plant falls more rapidly than that of the other plant

Finally, there are important post-war forces operating to reduce competition. The war's legacy of overexpanded or "sick" industries, to judge from the cases of agriculture and coal, will not lack for governmental assistance which may well take the form of compulsory cartellization. The wave of nationalism may bring into existence new barriers to international trade.

A review of this impressive although incomplete list leads, I believe, unambiguously to the conclusion that the major factor in the decline of competition has been governmental support of monopoly. This conclusion is reinforced when one considers the negative rôles of government, such as the anaemic administration of the antitrust laws until recent times, the weakness of control over corporate charters and activities, and the free play long allowed to the security-market promoters. It must be left to the reader to find a pleasant interpretation of this fact.

V—Other Bases of Monopoly

It would be easy to extend the list of bases of monopoly illustrated by T.N.E.C. material. Among the familiar bases on which evidence is provided, one may mention the ownership of natural resources and transportation facilities;[87] acquisition of assets of rival concerns;[88] the now declining rôle played by the investment bankers;[89] participation in international agreements restricting competition here and abroad;[90] and cultivation of consumer allegiance to particular brands, the allegiance being based proximately on extensive advertising and ultimately on consumers' ignorance of the technical properties of the commodities they buy.[91] But these may be passed over, for the T.N.E.C. follows well-worn paths.

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rises. Neither condition seems very realistic. (I am indebted to Mr. Herbert Stein on this point.)

[86] See the sulphite pulp allocation plan, *Victory*, January 13, 1942.

[87] On sulphur, see Hearings, Pt. 5, *Monopolistic Practices in Industries, Development of the Beryllium Industry*, pp. 1987 *ff.*; on iron ore, Hearings, Pt. 18, *Iron and Steel Industry*; on pipe lines, Hearings, Pts. 14 and 15, *Petroleum Industry*.

[88] A summary of such cases (which are not subject to section 7 of the Clayton act if assets, and not stock, are acquired), see Hearings, Pt. 5A, *Federal Trade Commission Report on Monopolistic Practices in Industries*, pp. 2361-86; also *Relative Efficiency*, monog. no. 13, Appendix C.

[89] For example, monog. no. 13, Appendix B.

[90] See Hearings, Pt. 5, *Monopolistic Practices*, pp. 1988 *ff.*; Hearings, Pt. 25, *Cartels*.

[91] There is a very useful compilation of information on the phenomena of "monopolistic competition" in *Price Behavior and Business Policy*, monog. no. 1, an exhaustive summary of the research on consumer standards by governmental agencies in *Consumer Standards*, monog. no. 24, and a miscellany of testimony in Hearings, Pt. 8, *Problems of the Consumer*. No general theoretical analysis is given, however, nor are recommendations for social policy explicit.

It may be worth while, however, to consider a less publicized basis of monopoly: monopoly. There is a tendency for monopoly to expand vertically to both market outlets and supply sources and horizontally into the markets for other products. Each of these phenomena will be considered briefly.

The retail outlets for monopolistically produced commodities are frequently cartellized. The situation appears to be most acute when there are a few producers of close substitutes: in their endeavor to secure outlets without resort to price competition, the producers establish their own outlets or offer many special favors to exclusive dealers. This development is well illustrated by the petroleum industry. The major companies have entered retailing on an extensive scale,[92] and in addition they have used wider retail margins, free equipment, free painting, credit card privileges, and threats of erecting competing stations in order to persuade independent dealers to handle only one major company's line of products.[93] There seems to be no doubt but that the competitive position of the smaller refineries has been seriously impaired by these practices. It is also probable that the resultant wastes of "excess capacity" have been great, but these wastes were not rigorously substantiated, let alone measured.[94] The situation in motion picture theatres is similar in many respects.[95]

The monopolistic powers in one product line may be used to coerce acceptance of additional products. Perhaps the most blatant instance was the large meat-packing company which secured widespread adoption of a brand of railroad draft gears in which it had a financial interest by promise or threat of diversion of its patronage.[96] A more pedestrian example is block-booking of motion pictures.[97]

[92] In 1935, eighteen major companies owned 38 per cent of the retail stations. The rise of the "Iowa Plan" of leasing the stations has blurred the distinction between ownership and exclusive contractual relationships with independent dealers.

[93] See the Hearings, Pt. 15A, ***Petroleum Industry, passim;*** Pt. 16, ***Petroleum Industry,*** pp. 8907 *ff*., 9137 *ff*., 9171 *ff*.; and Pt. 17, ***Petroleum Industry,*** pp. 9744 *ff*. The legalization of minimum retail margins by state fair-trade practice acts is not discussed. In addition there is evidence of collusion among retailers (Hearings, Pt. 16, ***Petroleum Industry,*** pp. 9031 *ff*.). An official of the retailers' trade association vehemently expressed his nostalgia for the good old days: "We had a code for the petroleum industry and for the people generally; it was the finest thing in the world, and the little opposition that we had to the Petroleum Code came from the dirty, lousy chiselers who were gypping the public in many ways" (Hearings, Pt. 17, ***Petroleum Industry,*** p. 9448).

[94] Mr. Swensrud of Standard Oil of Ohio argued that the number of filling stations is not excessive (Hearings, Pt. 15, ***Petroleum Industry,*** pp. 8678 *ff*.). His arguments do not appear to me to be wholly convincing but they deserve a detailed analysis they did not receive.

[95] See ***The Motion Picture Industry,*** monog. no. 43.

[96] Hearings, Pt. 5A, ***Federal Trade Commission Report on Monopolistic Practices in Industries,*** p. 2307.

[97] ***Motion Picture Industry—Pattern of Control,*** monog. no. 43, pp. 23 *ff*.

Finally, a very important example of the self-propagation of monopoly is vertical integration. Of course when vertical integration rests on technological economies—the stock example is the hot strip mill—the question of monopoly is usually irrelevant.[98] Such economies are historical: technological progress merely leads to a redefinition of the scope of the production process. But it is arguable that most of the important advantages of vertical integration partake of a monopolistic nature.[99]

Two typical causes of vertical integration will illustrate the monopolistic elements which are present. First, if the markets for raw materials or finished products are monopolized or threatened by monopolization, integration becomes a defensive weapon. Thus, the head of a major oil company pointed out the need for backward integration to combat monopolies,[100] and the head of the Beryllium Corporation saw the need for entering the fabricating field because the fabricating company did not wish to disturb its phosphor bronze market.[101] Second, integration on a large scale permits the manipulation of margins of various stages of the production process and hence endows the firm with considerable control over the competitive position of non-integrated rivals. The Hearings on iron ore, semi-fabricated steel, and the petroleum industry pay much attention to the topic, but as usual the witnesses were not questioned in sufficient detail or with sufficient persistence to establish definite conclusions.[102]

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[98] If the new process is subject to substantial economies of scale, of course, competition will be reduced at that stage and this decline may be communicated through vertical integration to other stages.

[99] The readers of this *Review* will not desire a repetition of the familiar argument that elimination of "middlemen's" profits and the like are illusory gains if the markets for supplies are competitively organized, although of course this point appears in the T.N.E.C. (*e.g.*, Hearings, Pt. 17, *Petroleum Industry*, p. 9749). Managerial economies, one would expect, should normally dictate horizontal, and not vertical, integration.

[100] Hearings, Pt. 14, *Petroleum Industry*, p. 7168. The argument was used to support the thesis that integration leads to competition, which is not unplausible in the light of the witness's concept of competition (*i.e.*, oligopoly).

[101] Hearings, Pt. 5, *Monopolistic Practices in Industries*, p. 2153.

[102] On iron ore—where the witness argued that an integrated concern is merely the algebraic sum of two independent firms—see Hearings, Pt. 18, *Iron and Steel Industry*, pp. 10360 *ff.*; on semi-fabricated steel, see Hearings, Pt. 20, *Iron and Steel Industry*, pp. 10747 *ff.*; numerous charges with respect to manipulation of margins are made against the petroleum industry in monog. no. 39 (*Control of the Petroleum Industry by Major Oil Companies*) but the charges are most inadequately documented.

PRICE AND PRODUCTION POLICIES

By M. M. Bober

The material of this essay is presented under three heads: first, the economic theory contained in the studies of the Temporary National Economic Committee in so far as it bears on price and production policies; second, such policies in certain specific industries; and third, price and production in the field of retail distribution. That this classification has faults is admitted. It is difficult, for instance, to draw the line between theory and practice; and it may be questioned why the basing point system is placed with the steel industry and not as a problem in theory. Likewise, the discussion of some of the selected industries includes their retailing practices, instead of segregating these practices under the third topic. Nevertheless, this particular organization seems to be a convenient way of blocking out the discussion of a far-flung investigation, and it is hoped that the reader will perceive the convenience as he proceeds.

I—Economic Theory

Viewpoints of the business man. It may be of interest to touch on some of the theoretical views voiced by the business representatives at the Hearings. The business man would not openly be drawn into a discussion of a theoretical flavor, invariably claiming that he is a practical man of experience and facts. Consciously or unconsciously, however, business witnesses gave expression to theoretical opinions.

The changes are rung on the following maxims. Each business is competitive because it is subject to the law of supply and demand, and if a high price is charged, the order is lost to a competitor. The consumer makes the final choice, and there is nothing for the producer to do but to strive to please. No business man will sit idly by and let a competitor get the orders; he will cut the price and get his share. A reasonable price is one which suffices to maintain the properties, cover expenses, carry on research for improving the product, and provide a fair return to the owners of the business, the stockholders. High prices are always attributed to the high cost of materials, to heavy taxes, and especially to wage advances. Poor or modest profits are a demonstration that the price is reasonable. As the volume of production rises, unit costs decline; and in a depression, unit costs rise owing to lower capacity and a higher overhead cost per unit. Advertising creates a mass market, with mass production and lower costs and prices. In

prosperity such prices are to be charged as will make up for the scant profits of lean years. Chaotic competition is destructive and is to be avoided; "stabilization" is to be sought after, above all.

The business man's concept of competition is interesting. It seems to stand less for rivalry and more for coöperation or for the exigencies of doing business in a given set of circumstances. A small concern manufacturing beryllium copper admits that it follows the price published by a leading company, and in a written statement to the committee declares that it "has no alternative except to meet such published prices in order to compete."[1] The negotiations between the largest seller of tinplate (the U.S. Steel Corporation) and the major buyer (American Can Co.) result in a competitive price, in the opinion of high officials in the steel industry; and a smaller firm selling at this price claims to be competing.[2] A trade association reports to the Federal Trade Commission that its objective is "the preservation of competition in its original sense of 'to strive together for common interests.' "[3]

Competition and monopoly. The theoretical discussions by economists are generally confined to elementary problems. The concept of competition is presented in terms made familiar in the last decade; and there is brief mention of oligopoly and the usual exposition of product differentiation. Monopoly is simply referred to as collusion among firms or as the concentration of the supply in one firm; and only once or twice is there reference to measures of the degree of monopoly power.[4] Dr. Clair Wilcox gives in brief paragraphs concise descriptions of nearly a dozen types of competition, such as perfect, pure, imperfect, monopolistic, predatory, potential, cutthroat competition. His inclusion of oligopoly as a form of competition stands, however, without justification. Oligopoly is characterized by him as a situation in which each of the few sellers of a product takes into consideration the price reactions of the other sellers: there is no mention of possible competitive behavior. The resulting price of oligopoly so described will be a monopoly price; and since Dr. Wilcox recognizes cases of monopoly, with monopoly prices, oligopoly should have been

[1] *Investigation of Concentration of Economic Power,* Hearings before Temporary National Economic Committee, February, March, May 1939, on Pub. Res. 113 (75th Cong.), Pt. 5, *Monopolistic Practices in Industries, Development of the Beryllium Industry* (Washington, Supt. Docs., 1939), pp. 2090, 2285.

[2] Hearings, Pt. 19, *Iron and Steel Industry,* pp. 10625-26, 10681.

[3] C. A. Pearce, *Trade Association Survey,* T.N.E.C. monog. no. 18, (Washington, Supt. Docs., 1940), p. 47.

[4] See, *e.g., Price Behavior and Business Policy,* monog. no. 1, Pt. 1, chap. 1; *Export Prices and Export Cartels,* monog. no. 6, pp. 74-80; *The Structure of Industry,* monog. no. 27, pp. 407-08.

classed as a type of monopoly.[5] There is the customary nonconformity in the use of terms. For example, perfect competition is used at times when pure competition is meant, inasmuch as the definition refers to a homogeneous commodity and many sellers, and without mention of the absence of friction.[6]

Dr. A. C. Hoffman presents two problems not commonly taken up in an elementary discussion. One is a diagrammatic exposition of price policy in an industry of one or a few large firms and many small ones.[7] To each small firm the demand for its product is almost perfectly elastic, but the dominant firm or firms, by varying the output, can affect the price and assume the rôle of price leadership. In their effort to maximize profits as oligopolists, the dominant firms must, however, take into consideration the production response of the small firms to a high price set for the article. The more elastic the supply of the small firms, or the easier the entry, the more are the large firms apt to lose part of their market if the maximization of their profits entails a high price.

The other problem deals with bilateral monopoly,[8] exemplified when both the seller and the buyer are monopolists—the manufacturer selling to the retailer, the owner of raw materials selling to the manufacturer, etc. Dr. Hoffman is unaware that this problem is known in economic literature, and has been examined by Cournot, Edgeworth, Pigou, Wicksell, Bowley, Schneider, and others.[9] However, he deserves credit for recreating independently essential phases of a complicated analysis.

The theory has several aspects and the solutions depend on the assumptions. Dr. Hoffman considers three cases. One, the seller, a manufacturer, sets the price, and the buyer, the retailer, adjusts the quantity. The seller would begin by setting a price calculated to maximize his profits; and if the second monopolist would buy all that the seller would like to sell at the set price, the second monopolist (the retailer) would, with a given demand curve by the consumer, receive a margin merely sufficient to cover the cost of his services. In other words, the first monopolist (the manufacturer) would alone reap the monopoly profit. Accordingly the second monopolist, to obtain some monopoly advantage by enhancing the consumer price above the price which the first monopolist had in view, will purchase less than the first

[5] *Competition and Monopoly in American Industry,* monog. no. 21, pp. 5, 9-10.

[6] See, *e.g., Large-Scale Organization in the Food Industries,* monog. no. 35, p. 79.

[7] *Ibid.,* pp. 81-84. (For some of the literature on the subject see G. J. Stigler, "Notes on the Theory of Duopoly," *Jour. of Pol. Econ.,* Vol. XLVIII (1940), p. 522 n. 2).

[8] *Ibid.,* pp. 84, 161-65.

[9] See, *e.g.,* E. Schneider, *Reine Theorie monopolistischer Wirtschaftsformen* (Tübingen, 1932), chap. 2.

monopolist is ready to sell for the maximization of his profits. Worsened by this move, the first monopolist will lower the price to induce the second monopolist to buy more. Marginal cost and marginal revenue are the foci of consideration for both monopolists. The conclusion is that the jockeying will result in a higher price to the consumer and more restricted production than would rule in the familiar cases of one monopolist in a market.

The second case taken up by Dr. Hoffman assumes that the buyer (the second monopolist) sets the price, and the seller adjusts the quantity. The analysis and the conclusions are similar to those of the first case. The third case, briefly mentioned early in the discussion, assumes collusion between the two monopolists on an agreed basis of sharing the profits. Obviously, in this case, the price and the volume of production will behave in the same manner as with a single monopolist. It is noteworthy that, without the use of marginal revenue and marginal cost tools, Bowley offers a somewhat similar approach.[10]

Rigid and flexible prices. The controversy over inflexible prices receives adequate treatment in a well thought-out chapter by Dr. Saul Nelson.[11] He steers a cautious course between the thesis which sees competition in flexible prices and monopoly policy in rigid prices, on the one hand, and the view, on the other hand, which tries to explain price sensitiveness wholly in terms of the market setting. He sees some truth in both but perceives that careful analysis forbids firm generalizations. As a very general proposition, prices are flexible when they are market-determined, that is, competitive. Likewise very rigid prices may point to the presence of monopoly in the traditional or antitrust law sense, when the commodities affected are standardized, or they may imply product differentiation or other aspects of non-price competition, if the products involved are not standardized (pp. 15, 32, 37). But account must also be taken of the specific market situation: *e.g.*, an unchanged price for an article of improved quality is not to be termed inflexible (pp. 27-28).

A study of 111 commodities (p. 38) for 1929-33 discourages a sharp division between categories of goods of small price declines in recession and greatly curtailed production and those of sharp price declines and small declines in production. For durable goods the coefficient of correlation between price and production declines is only —.12, although for nondurable goods it is —.44. There is, however, a broad tendency for small drops in price to be associated with appreciable curtailment of production; and there is a "marked tendency" for such an association as we move toward goods of increasing durability. But we are cautioned

[10] A. L. Bowley, "Bilateral Monopoly," *Econ. Jour.*, Vol. XXXVII (1928), pp. 651-59.

[11] *Price Behavior and Business Policy*, monog. no. 1, Pt. 1, chap. 2.

against postulating a causal connection between such price and production declines: it should not necessarily be inferred that production dropped considerably because the price was not brought down sufficiently. "It happens," says Dr. Nelson, "that the severest price declines during the depression occurred in precisely those industries which produced the most urgent necessities of life, while the smallest declines were to be found among those commodities whose purchase could best be deferred" (p. 40). Necessities would be bought in large quantities even if their prices were but slightly reduced in a depression; and postponable commodities would suffer a great drop in sales even at much lower prices.

It must also be realized, Dr. Nelson insists, that the emphasis on price declines in a depression must extend beyond commodities to such items as rent, wages, interest rates on mortgages, public utility rates, professional fees, and taxes (p. 13). A fall in commodity prices but not in these other particulars may express a distortion in the price patterns as injurious to the economy as the concurrence of flexible and rigid prices for commodities alone (p. 50). He makes the interesting observation that a reduction in prices and charges throughout the economy may come to reflect a settled lower level of incomes, costs, employment and output—without the stimulus to recovery which some are in the habit of finding in reduced prices (pp. 42-43).

At each step statistical findings are presented as illustrations. Fourteen measures of price flexibility, 11 of them developed for this study, were applied to the 784 price series of the B.L.S. index, to test various aspects of flexibility or rigidity during various periods of time, and the results are presented in great detail.[12]

There is a measure of agreement among the investigators for the committee on this subject. Dr. Hoffman is not ready to consider monopoly exclusively responsible for insensitive prices, holding that the preponderance of overhead or variable costs is of paramount significance.[13] Dr. W. F. Crowder, on the basis of an elaborate statistical investigation, comes to the definite conclusion that price and production behavior can best be related to the nature of the particular product and its market and not to the degree of concentration of production.[14] Of course concentration of production is not necessarily identified with aspects of monopoly behavior. Dr. Wilcox alone seems to incline to Dr. Gardiner Means's thesis. After a brief summary of the statistical studies on the subject and of the arguments on both sides, he concludes

[12] *Ibid.*, Pt. 1, Appendix 1.

[13] *Large-Scale Organization in the Food Industries*, monog. no. 35, pp. 113 n. 2, 118; *cf.* p. 71.

[14] *The Structure of Industry*, monog. no. 27, pp. 402-06, 411.

that rigid prices in an industry facing a falling demand and mounting unemployment can only betoken monopolistic behavior.[15]

Nonprice competition. There is a long chapter on this topic.[16] Skeptical about the frequently voiced generalization that competition is in progressive decline, the treatment underlines the conception that there is a redirection of the channels of competition from price to other factors, so that in many sectors, if not generally, competitive rivalry still prevails but with a different focus. The reasons for the trend away from price competition are found in technological progress precipitating the proliferation of varieties and subvarieties of goods, in the distaste of the business man for rivalry in terms of price, in the pressure of the so-called "fair trade" and "unfair practices" laws, and in a changed market structure. The chief avenues of nonprice competition run along quality, brands, service, guarantees, price-lines (to be discussed under retailing), and the like. There is an evaluation of the growing importance of this type of competition in its implications for price policy, the complication of consumers' choices, and social policy. There is no analysis of the impact on the scale of production, costs, monopoly elements, and investment. The chapter is more informational than analytical.

Wage rates and price. An interesting statistical investigation is offered which throws light on the relation between price policy and wage rates and labor costs.[17] Confined to two shoe companies, two paper companies, one cotton textile concern, and the International Harvester Company, and, moreover, to selected articles and over a short period, this study is limited in scope, but it tends to support theoretical discussion of short-run price determination. One must hesitate to translate the diverse facets of the exploration into clear-cut propositions, but the following conclusions of the pertinent parts may be outlined.

Despite the insistent emphasis of business men on high wages as the foundation of high prices, there is less causation between wage rates and labor costs on the one hand and the price of the product on the other than entrepreneurs realize. Price changes precede wage changes in recession and recovery alike (pp. 15-16). In the International Harvester Company, for instance, deliberations on price policy begin with costs as a frame of reference, but controlling consideration is given to a variety of general and specific market conditions so that cost becomes one of many factors (p. 84). For the whole period of 1929-37, changes in the market situation and costs other than the wage bill overshadowed labor costs in price considerations (p. 126).

[15] *Competition and Monopoly in American Industry,* monog. no. 21, pp. 306-07.

[16] *Ibid.,* Pt. 1, chap. 3.

[17] *Industrial Wage Rates, Labor Costs and Price Policies,* monog. no. 5.

In a depression the governing factor is the market setting—the falling demand, the degree of competition, etc.—and once a low price is established pressure follows to reduce labor and other costs. In recovery, costs are somewhat more prominent as a stimulus to rising prices, and wage increases accompany improved prices for the product (pp. 19, 88). If a firm is in a position of price leadership, or if it produces a uniquely differentiated article, more latitude prevails in the formulation of price policy, and then wages, and even costs generally, are more definitely subordinate as price determinants. However, in all cases wages affect profits and the cash position of a firm and are on this account of vital concern to a business, especially in a falling market (pp. 20-22, 40, 120).

In firms in which materials compose a major proportion of the expenditures and are flexible in price, the correspondence between the price of the product and total costs is close; but there should be no inference of a causal link from cost to price (pp. 16-17). In such an instance, as well as in the case where the prices of both the materials and the final product are formed in a competitive market, the profit margin will depend on overhead and labor costs. Accordingly, in a prolonged and severe depression, overhead costs will have a rôle in price policy: to reduce the overhead cost per unit of product by increasing the volume of production, a price will be instituted which will cover variable costs and contribute slightly to overhead costs. Equally, wages will be lowered to permit lower prices and larger volume (pp. 40-41, 50, 52-53).

In periods of rapid and wide industrial fluctuations overhead costs, a large factor, *e.g.*, in the International Harvester Company, have a prominent influence on unit costs. The decline of production in 1929-33 was reflected in rising unit costs, with the consequent pressure for economy in adjustable costs, such as those of labor and materials. The picture was different in these regards in the relative upswing of 1933-37 (pp. 121, 127). But even in these periods there was "lack of any close relationship between changes in season's labor and material costs and changes in prices" of agricultural implements, although company officials stressed rigid costs as one of the principal factors responsible for the failure to reduce prices and maintain production in the former period of 1929-33, and high costs for the advance in prices in the latter period of 1933-37 (pp. 70, 87, 89, 91).[18]

[18] Mention is to be made of an elaborate field study (*Export Prices and Export Cartels*, monog. no. 6, Pt. 1), defying summary, which compares export and domestic prices of specified products by anonymous firms. The analytical paragraphs break no new ground; but there is an abundance of examples of selling practices and an outline of the reasons offered by business men for quoting an export price equal to, or higher or lower than, the domestic price.

General observations. It is probably fair to state that the explicitly theoretical formulations touching on price and production policy solve no old problems and raise few new issues, but generally treat well the problem in hand, and with an abundance of factual and statistical illustrations. Certain important omissions must, however, be noted.

First, an investigation of this character needs to give formal and extended treatment to the questions of what constitutes a normal or desirable price pattern in the various segments of our economy; what constitutes a serious distortion in the price structure; and why a distortion deranges our economy, in view of the possible contention that, *e.g.*, with low prices in a given sector like agriculture, what Peter, the farmer, loses as a seller Paul, the city worker, gains as a buyer, and Paul has more money to spend on other goods, instead of Peter. These paramount questions receive only incidental consideration, by Dr. Nelson in his discussion of rigid prices and by Dr. D. H. Wallace in his noteworthy résumé of government regulation of certain industries.[19]

Second, because of the prevalence of price differentiation and nonprice competition generally, advertising becomes a central problem in theory. Yet there is scant discussion of the effects of advertising on the scale of production, costs, investment, and prices.

Third, there is little or no analysis of such relevant problems as the components of cost and the behavior of costs in the firm and the industry; of the theory of oligopoly; and of the influence of commodity speculation on prices.

II—Selected Industries

When turning to the sketch of price and production policies in specific industries—construction, milk, oil, and steel—it is necessary to remember that the chief objective of the committee's investigations was the concentration of economic power, that all discussion was primarily oriented to this objective, and that aspects of price and production, far from finding a focus of their own, are auxiliary to the central purpose. One must not expect special studies of price and production in given periods of time and in given places, in relation to unique circumstances and market structures. Price and production behavior is, rather, embedded in a context of description of monopoly and competition; and this is more true of the milk and oil industries than of the construction and steel industries. The scrutiny of each industry seems to have its center of gravity in the proposition that the

[19] *Economic Standards of Government Price Control,* monog. no. 32, pp. 494-96, 500-04. See also *Technology in Our Economy,* monog. no. 22, pp. 190-94.

cause is monopoly and the cure is competition. This circumstance explains the tenor of the account that follows.

The construction industry. The construction industry[20] exhibits three related maladies. First, like all durable goods industries, it is expected to make its contribution to recovery with the termination of a recession; and yet in the revival of 1937 this industry notoriously lagged behind both in employment and in the dollar value of the product. In the peak of 1937 durable goods industries reached the level of employment of 1929, whereas the construction industry, as well as the industries preparing materials for construction, failed to reach such a level, varying from 65 per cent of the 1929 level for lumber millwork to 87 per cent of this level for plumbers' supplies.[21] Second, throughout the period of 1929-37, building materials were higher in price than either capital goods generally or the B.L.S. index of commodities,[22] thus contributing to the impairment of economic activity associated with marked dislocations in the price structures of the different segments of our economy.

Third, the residential house building industry is marked by a distressing disequilibrium between supply and demand. The volume of low priced housing in demand by the population obviously far exceeds the volume of high priced housing; nevertheless, the amount of building from year to year is remarkably small in the former class and remarkably large in the latter. Forty-eight per cent of the homes built in 1934 were valued at between $6,000 and $10,000, but only 15 per cent of city families could afford to rent or buy such houses; 48 per cent of city families can afford to buy or rent homes selling at $4,000 or less, but only 20 per cent of the houses built are in this category.[23] For the period of 1922-38, the volume of private house building traces a curve like that of the volume of high priced (over $750) automobiles sold, and not at all like the curve of low priced automobiles sold.[24] Stated generally, at prices which equilibrate supply and demand for the masses of the poor, the housing obtained is of demonstrably inadequate character. In the famous phrase, one-third of the nation is ill-housed.

Many are the factors responsible for these conditions, and the in-

[20] Hearings, Pt. 11, *Construction Industry; Toward More Housing*, monog. no. 8; *Geographical Differentials in Prices of Building Materials*, monog. no. 33; *Competition and Monopoly in American Industry*, monog. no. 21, pp. 287-89.

[21] Hearings, Pt. 11, *Construction Industry*, pp. 4936 *ff*.

[22] *Ibid.*, pp. 5232, 5447-51.

[23] *Ibid.*, pp. 4962, 5479; *cf.* p. 4983. See *ibid.*, the testimony of R. L. Davison, T. J. Kreps, and W. Thorp.

[24] *Ibid.*, p. 4985.

vestigations pay attention to heavy taxes, high interest rates in house finance, and inflated land values. Chief emphasis is given, however, especially by the economists who summarize the situation, to two circumstances: obsolete methods of production and monopolistic prices.[25] While the production of most building materials is characterized by modern methods, the actual construction of houses is largely reminiscent of the handicraft days. The building process involves numerous distinct parts and many independent crafts and retailing operations, often without the integrating management of an experienced entrepreneur: the building of many a "home" is supervised by the housewife. The small size of the enterprise, the general lack of technological improvements and standardization of materials, poor, uncoördinated management, the tradition-ridden and parochial attitude of the public and city governments alike, combine to stamp the house building industry as one of low productivity and high costs.[26]

The second circumstance is the almost complete subjection of the industry to varying degrees of monopoly power. Oligopolies and strong national trade associations in the supply of materials are paralleled by the local monopolies of contractors, dealers and labor, with high and rigid prices, wages and costs almost wherever one turns. There is, in addition, vigorous opposition, by labor and the small local business men alike, to labor saving devices, to innovation and experimentation, and to the enlargement of markets and the scale of production. The industry tends to support the affirmation that the monopolizing spirit is not the unique attribute of big business, but is to be found as well in the man in overalls and in the village tradesman.[27] Reinforcing the element of monopoly is the fact that a house, consisting of a multitude of parts and involving many classes of labor, reflects a joint demand. Accordingly the seller of any given part, or any group of laborers, may feel that a low price for the individual product or service, constituting but a small part of the cost of a house, will not have a stimulating effect on house building. The seller considers the demand for his product or labor very inelastic. No one agency will be induced to diminish the price in face of a declining demand unless all the agencies essential to the industry will simultaneously reduce their prices.

Some aspects of the price and production data for the industry deserve comment. For the period of 1929-38, charts show an inverse relationship between nonresidential construction and the "exchange

[25] *Ibid.*, testimony of T. J. Kreps and W. Thorp; *Toward More Housing*, monog. no. 8.

[26] *Toward More Housing*, monog. no. 8, pp. 61, 130, 133.

[27] *Ibid.*, pp. 134-35; Hearings, Pt. 11, *Construction Industry*, testimony of W. Thorp and T. Arnold.

value," or barter terms of trade, of iron and steel; and similarly between residential construction and the "exchange-value" of lumber and of brick and tile. Construction declines in volume as the value of structural materials rises, that is, as more goods have to be offered in exchange for materials.[28] The discussion of these charts at the Hearings suggests a causal connection between these two variables, clearly implying that if in a recession the prices of building materials and of capital goods in general fluctuated in accord with other prices, building and durable goods industries would play a prominent and initiating rôle in recovery, as was the case before the past two decades. However, we do not know enough about business cycles to accept this inference. More than one theory of the trade cycle suggests that the impulse to recovery will have to come from more directions than lower prices for capital goods.

A separate monograph[29] presents a very elaborate collection of figures for 37 building materials, from asphalt to white lead, in 50 cities, in every state, during the period from January 1935, to September 1939. Actual prices, wholesale and retail, and corresponding monthly price indices are offered for each of the nine geographical regions of the country. Only a few summarizing remarks can be given here. The most common types of geographical price structures used are the freight equalization, the multiple basing point, and the zone systems. The national trend of wholesale prices of these commodities was upward for the period, with a considerable rise in 1936-37. During any part of this period some commodities were not with the trend but remained stable or moved in the opposite direction. The retail prices of each article followed the trend of its wholesale prices, but the fluctuations were narrower. Of the regional trends, some conformed to the national curve, and others departed from it. In general, regions closer to the producing areas of certain articles enjoyed lower prices, while far-off regions showed the disadvantage of transportation costs. Thus the retail price of sand, gravel and crushed stone was consistently lower in New England and in the Rocky Mountain and Pacific regions than in other areas. For most articles, however, except, *e.g.*, fir doors, prices were high in these latter two regions and low in the Northeast. The wholesale prices of insulation board and plumbing fixtures exhibit, for carlot shipments, no geographical variation, since the practice is to allow full freight. Where, as in the case of lime, there is a wide geographical distribution of small plants, the pricing practices display no discernible pattern for the country. Where retail prices tended to be

[28] Hearings, Pt. 11, *Construction Industry*, pp. 5447-52.

[29] *Geographical Differentials in Prices of Building Materials*, monog. no. 33.

high, the margin to the retailer was high. This means that margins were high away from producing areas. Higher margins seem also to be associated with inflexible retail prices.

The investigations of this industry offer abundant new data on the prices of building materials, samples of the costs of building operations and their components, figures on wage rates in building trades, and statistical illustrations of the disequilibrium between the supply and demand for housing. There is little or no discussion of such topics as the so-called long cycles in the industry; the evidence that building anticipates a recession; the effects of war on building; and the fluctuations in and the unique problems of the construction industry aside from city housing, *e.g.*, activity in the field of public utilities, factory construction, or rural building. It is worth noting that, while the T.N.E.C. studies establish that labor costs constitute a considerable proportion of the total costs of construction, there is a disposition to tone down the effect of monopolistic practices of labor on building costs.

The milk industry. In the milk industry, while the two leading companies, the National Dairy Products Corporation and the Borden Company, do not control over 12 and 8 per cent, respectively, of the country's fluid milk not consumed on the farm, in many cities 4 or 5 large distributors handle from nearly 60 to 90 per cent of it. There is no evidence of price competition among the oligopolies, but not a little evidence of price setting and of higher prices than those charged by small independents.[30]

Milk sold to the distributors and processors is not treated as a homogeneous product. Class I milk is bottled milk used as a beverage; it needs greater care and brings a higher price to the farmer. Class II, and further classifications, represent milk used for dairy products, like fluid cream, butter, cheese, ice cream, and condensed milk: it is commonly referred to as surplus milk.[31] Under competitive conditions all the milk would sell at a price in accordance with its marginal use; but both producer and distributor, having some degree of monopoly advantage, prefer to protect the price of fluid milk at a comparatively high level and divert the "surplus" milk at lower prices to manufactured dairy products.

The method of distribution to the consumer is a bone of contention. The distributing companies—and truckmen's unions—prefer the daily doorstep delivery, in the opinion that it assures a large and steady demand, and that the housewife will often neglect to buy milk if she has to go for it to the store or depot. Such delivery entails inevitable waste. A study of the situation in Milwaukee for March 16, 1934,

[30] Hearings, Pt. 7, *Milk Industry*, pp. 2763, 2851, 3137, 3196-97, 3202-04, 3221.

[31] *Ibid.*, pp. 2960, 2965.

revealed that in 1,020 blocks an average of 6.8 concerns delivered milk in a block. In one extreme case, 17 concerns served one block. Nearly 1,000 individual premises had "duplication of delivery."[32]

The price of milk to the consumer stood high and rigid, even during the depression of the 1930's. But the farmer's share of each dollar spent on dairy products declined from 52 cents in 1923, which is generally taken to mark the beginning of the growth of the large processing and distributing companies, to 35 cents in 1933; and the processor-distributor's share rose correspondingly.[33] Whether, and to what extent, this represents exploitation of the farmer by the distributor cannot be judged without an analysis of the supplies of milk and of the costs of processing and marketing in this period; but such data are not presented. The price paid the farmer and the margin secured by the distributor are not necessarily at the expense of each other. A large supply of milk may depress the price to the farmer; while rising costs of processing and marketing may simultaneously induce high margins to the seller of the finished product. In fact, a large supply of milk may enhance the demand for the services of the distributor. The complaint is voiced that the large dairy companies are especially interested in pushing the much advertised and differentiated manufactured milk products, like cheese and canned milk, and for these goods, although they are inferior as a food to milk, the market has grown and the price has declined.[34]

Arrays of figures are presented here and there to indicate the price behavior of fluid milk in various towns and at various times. Unfortunately, the significance of the data is considerably diminished in view of the lack of parallel studies of costs in these localities and of the various other aspects of the respective market patterns.[35]

Some of the government experts seem to be impressed by the experience of an independent dealer in Detroit[36] and by studies in Milwaukee, both indicating that milk can be sold at 6 cents to 8 cents a quart at depots on the cash-and-carry basis. Indeed, while some of the experts are content with the suggestion that a vigorous milk industry is contingent upon the restoration of competitive conditions therein, one of them, Dr. F. C. Howe, sees a definite panacea in the depot method of distributing milk.[37] He is of the opinion that a "free competitive system" would "automatically" result if "milk flowed

[32] *Ibid.*, p. 2784.

[33] *Ibid.*, p. 2800.

[34] *Ibid.*, pp. 2791, 3029.

[35] *Ibid.*, pp. 3190-93.

[36] *Ibid.*, testimony of G. A. Johnson.

[37] *Ibid.*, pp. 2814-32, 3134.

freely through the pasteurization plant at a custom or tolling charge determined by cost and was available to all buyers."

It is difficult to share such optimism. We are not told about the agency that will negotiate with the farmers for the supply of milk for the depot, what assurance there is that this agency will not strive for large profits, and how the farmers will dispose of their surplus milk. We need to know the relative elasticities of demand for fluid milk and for the varieties of dairy products if we are to gauge the effect of a price change in any one class of milk upon the competition, or the diversion, from the other classes, or upon the incomes of the farmers. Account has also to be taken of the cost of building and managing pasteurization plants and properly located depots in a large city, of scientific experimentation and educational advertising, and of doorstep delivery. Without such studies it is difficult to estimate the degree of power exercised by the bilateral monopoly (*i.e.,* the customary bargaining between the farmers' coöperatives and the large distributors) in the industry, the possible reductions in the price of milk and the concomitant rise in the consumption of it, and, generally, the repercussions of alternative methods of distributing milk.

Since 1933 the milk industry has joined the ranks of enterprises regulated by federal or state authorities, and the experience, treated in a separate study[38] which deals also with the regulation of the more commonly recognized "public utilities" in three sample states and of bituminous coal, gives some idea of the price and production policies of regulatory bodies. The inquiry is detailed and scholarly, and Dr. D. H. Wallace's hundred-page summary is shot through with theoretical considerations and broad views of social policy. The study approaches the problem from three angles: the level of prices set by regulation; the price structure as among the different classes of goods; and the impact of the prices upon employment.

The foundation of federal regulation of milk prices is the celebrated principle of "parity prices" to farmers. In a number of milk markets to which the interstate commerce clause applies the farmers' coöperatives, the large distributors and government authorities collaborate in setting the price of Class I and Class II milk (cream). It has proved impossible to raise the price to the "parity" level, principally because of the competition of outlying areas and the diversion of Class III, that is, manufacturing milk. However, owing to the restrictive measures of the coöperatives and the sanitation authorities, prices have been raised appreciably. The distributors' margins have remained unaffected, and the full incidence of federal regulation seems to have been on the consumers' pocketbook.

[38] *Economic Standards of Government Price Control,* monog. no. 29, Pts. 2 and 4.

All the five milk regulating states investigated in this study—California, Indiana, New York, Oregon, and Wisconsin—set minimum prices to the farmer on Class I and Class II milk, and in some markets in some of these states, on the other classes as well. None sets maximum prices. All states fix the resale price to the consumer, evidently to avoid impairment of the price structure set for the producer; but New York abandoned this policy in 1937. In all states, especially in California, attention is given, in varying degrees, to cost calculations. In California the objective is to establish a differential between fluid and manufacturing milk commensurate with the difference in costs in preparing the two types of product; but in the other four states the principal goal is to enlarge farmers' incomes. In three of these states there is some control of entry, and one of these three, Oregon, has formulated a definite scheme of restricting output. In most of these states, notably Indiana and New York, procedure relies on bargaining between producers and distributors with assistance from the public official; and in all of them, except California, objectives and standards are vaguely expressed in such terms as "fair price," "orderly marketing," "reasonable profits." The available evidence indicates that state control has resulted in advanced prices to the farmers; but there is precarious evidence regarding distributors' margins. After a consideration of the various aspects of a transfer of income from one group of persons to another, the conclusion is reached that raising milk prices to the farmer failed to contribute to general recovery.

The petroleum industry. The consistent theme running through the extended investigations of the petroleum industry[39] is the power and practices of the twenty large integrated companies, commonly referred to as the major companies, and the sad plight of the independents. Little is to be found on price and production structures.

The production of crude oil exemplifies alike the difficulties of unrestrained rivalry and the inadequacies of partial planning. For nearly a decade and a half after the First World War periodic overproduction, price wars, waste, and violent fluctuations in costs and earnings characterized this field, where entry is free and investment and the scale of operations small. The situation was aggravated by the law of capture and the disregard of underground oil for the legalities of the surface boundaries of ownership. In response to the demands for conservation and the "stabilization" of the industry various states adopted proration laws, restricting the production of crude with some regard to

[39] Hearings, Pts. 14-17, 14A, 15A, 17A, *Petroleum Industry; Control of the Petroleum Industry by Major Oil Companies*, monog. no. 39; *Review and Criticism on Behalf of Standard Oil Co. (N.J.) and Sun Oil Co., of Monograph No. 39 with Rejoinder by Monograph Author*, monog. no. 39A.

an estimated demand. These attempts at planned production have been haphazard and of varying degrees of earnestness, and the complaints from the small independents have been numerous. An obvious difficulty rests on the fact that the amount of oil demanded is a function of the price, and price, even in a wayward industry like oil, depends at least partly on cost, which in turn is governed by the amount produced by an entrepreneur: this amount is determined by the quota, but the quota is fixed by the estimated demand. The planner's lot is not a happy one.

The production of crude is to this day a blend of competition and monopoly. Many independents prospect, discover wells and operate them;[40] but much of their land is leased by the major companies. The majors produce one-half of their crude, and they buy from the independents more than they need for refining, selling the excess from time to time in order to influence the market.[41] A small group of large buyers, they confront the many independent sellers with a price set by a leader or by explicit agreement. Nevertheless the price for crude has not been inflexible; during the period between 1926 and 1933, California crude had 19 changes in price, Kansas crude had 45, and Pennsylvania crude had 60. During a period of relatively great economic activity, 1926 to April 1929, the corresponding frequencies of price changes were 7, 18 and 24.[42] However, between 1934-38, prices seem to have been very rigid.[43]

In the movement of crude to the refinery and of gasoline to the consuming markets the pipe line is essential; and since transportation by rail is twice as expensive, the majors, who own the pipe lines, have monopoly power over the independent shipper. The independent is compelled to sell his crude to a few buyers; or to ship over the pipe lines at a profit to their owners; or to build refineries near the oil fields and operate on a small scale and away from the consuming centers.[44] From the refinery the gasoline is moved, in tank cars and tankers, by refiner and jobber, to the bulk station, and from there it is distributed to retailers. The independent refiners without retail outlets sell the gasoline at prices based upon those posted in the trade journals: this is the spot market, sensitive, fluctuating and subject to manipulation. Independents and jobbers who ship the products over pipe lines are subject to a multiple basing point system, under which the rail rate is

[40] Hearings, Pt. 17, *Petroleum Industry*, p. 9934.

[41] To whom the excess is sold and precisely how the market is influenced are not cleared up. See *Hearings*, Pt. 14A, *Petroleum Industry*, pp. 7714-15.

[42] *Price Behavior and Business Policy*, monog. no. 1, pp. 178, 166.

[43] Hearings, Pt. 14, *Petroleum Industry*, p. 7520, Exhibit no. 1177.

[44] *Ibid.*, pp. 7106, 7224, 7338, 7352, 7367-70, 7373, 7376, 7581-6.

charged to destination.[45] There is evidence that the majors exert pressure on the railroads to adjust the rates unfavorably to competitors.[46]

The retailing of gasoline expresses the same type of monopolistic competition as is apt to be observed in any other occupation representing differentiation of service, free entry, little requisite experience, and small scale investment. The difference between the properties of many of the gasoline brands are hardly outstanding, yet the brands are intensely advertised as unique creations, and each brand seeks individual outlets.[47] Most of the gasoline stations—85 per cent of them[48] —and therefore most of the dealers are controlled by the majors, either as employees or under the lease system known as the Iowa plan. In either case the sale of competitive brands is discouraged by subsidies and penalties.[49] The sequel is that there are too many gasoline stations, too many of them are of needlessly expensive architecture, too many operate under capacity, and the expense of retailing as well as the price to the consumer are too high.[50]

There is evidence of retail price setting by the majors, by collusion or price leadership.[51] It seems that at least one retailers' trade association is far from rising above similar practices; and there have been examples of outright agreements, by majors and independents alike, to fix wholesale and retail prices.[52] A local price war may develop owing to one or more of such circumstances as the following. A new gasoline station may decide to lure customers with a low price. A seller of unbranded gas may start cutting the price. An ambitious dealer may attempt to make money by larger sales at a reduced price. A rumor may get around that a neighboring station is making secret price concessions to customers. A company agent may drop the remark to a lessee that his gallonage is below what it should be because he is not sufficiently competitive, and the lessee, fearing the cancellation of

[45] *Ibid.*, pp. 7269-70; Hearings, Pt. 14A, *Petroleum Industry*, pp. 8123-45; Hearings, Pt. 17, *Petroleum Industry*, p. 9817.

[46] Hearings, Pt. 15, *Petroleum Industry*, pp. 8315-23; Hearings, Pt. 16, *Petroleum Industry*, pp. 9068-9125.

[47] There is a general practice among the majors to exchange gasoline, and instances are not wanting in which the purchased gasoline was sold as the purchaser's brand. See Hearings, Pt. 16, *Petroleum Industry*, pp. 9141 *ff.*; Hearings, Pt. 17, *Petroleum Industry*, pp. 9864-9926; Hearings, Pt. 15, *Petroleum Industry*, p. 8409. *Cf. ibid.*, pp. 8409-10.

[48] Hearings, Pt. 15A, *Petroleum Industry*, p. 8735.

[49] Hearings, Pt. 15, *Petroleum Industry*, pp. 8471-75; Hearings, Pt. 15A, *Petroleum Industry*, pp. 8731-90; Hearings, Pt. 16, *Petroleum Industry*, pp. 9171 *ff.*, 9212.

[50] See Hearings, Pt. 15, *Petroleum Industry*, pp. 8678-81, for the views of a company official.

[51] Hearings, Pt. 16, *Petroleum Industry*, pp. 9047, 9055.

[52] *Ibid.*, pp. 9040 *ff.*, 9307-10; *Competition and Monopoly in American Industry*, monog. no. 21, pp. 136, 251.

the lease, strives to raise his sales.[53] During the period between 1926 and 1933, gasoline prices were, by every measure, definitely flexible.[54] According to the testimony of representatives of the industry, the retail price of gasoline between 1923 and 1937 showed a downward trend and was consistently below the B.L.S. index.[55] However, the earnings of 24 companies in the industry rose by 47 per cent in 1937 over 1923, while the income in all manufacturing industries advanced by 8.8 per cent, and the national income by 4.1 per cent.[56]

In evaluating data on price and earnings it is well to remember that, except when the station attendant is explicitly an employee of a company, the incidence of price reductions in gasoline is at least in part on the leasing dealer. Further, while all the marketing phases, from the refinery to the consumer (with the station dealer as an employee of a company), are frequently unremunerative to the majors, what matters to them is the net earnings on the integrated operations as a whole, and such earnings have made a good record.[57]

The iron and steel industry. The best study of price and production policy in any of the T.N.E.C. surveys is connected with the examination of the iron and steel industry. Prior to the Hearings, the U. S. Steel Corporation prepared a number of important analyses, under the direction of Dr. T. O. Yntema, dealing primarily with demand and cost phases of steel and defending the basing point system.[58] In their turn the experts for the committee subjected many of these studies to a searching criticism.[59] There is room only for a sketch of some of these studies, but not for comments on the testimony of business men at the Hearings,[60] which was, however, scarcely different in tenor from the testimony at the Hearings on the other industries.

On the demand for steel two studies presented by the U. S. Steel

[53] *Cf.* Hearings, Pt. 15, *Petroleum Industry*, pp. 8422, 8433-39.

[54] *Price Behavior and Business Policy*, monog. no. 1, pp. 178, 166.

[55] Hearings, Pt. 14, *Petroleum Industry*, p. 7486; Hearings, Pt. 14, *Petroleum Industry*, p. 8713.

[56] Hearings, Pt. 14, *Petroleum Industry*, pp. 7676, 7158, 7509.

[57] Hearings, Pt. 16, *Petroleum Industry*, pp. 9027-31; Hearings, Pt. 17, *Petroleum Industry*, pp. 9608-11, 10040-42; *Control of the Petroleum Industry by Major Oil Companies*, monog. no. 39, pp. 6, 61.

[58] See Exhibits nos. 1410-1418 and nos. 2180-2182. Exhibit no. 1418 appears in Hearings, Pt. 27, *Iron and Steel Industry*, pp. 14619-94; all the other exhibits are in Hearings, Pt. 26, *Iron and Steel Industry*, pp. 13893-14119.

[59] Hearings, Pts. 26 and 27, *Iron and Steel Industry; Price Discrimination in Steel*, monog. no. 41; *The Basing Point Problem*, monog. no. 42. On the basing point system see also Hearings, Pt. 5, *Monopolistic Practices in Industries*, pp. 1861-1950; *Price Behavior and Business Policy*, monog. no. 1, Pt. 2; *Geographical Differentials in Prices of Building Materials*, monog. no. 33.

[60] Hearings, Pts. 18, 19, 20, 26, 27, *Iron and Steel Industry*.

Corporation are of special importance. One study examines the demand for steel in the major steel consuming industries.[61] The cost of steel used in making the products concerned constitutes 10 per cent of the price of automobiles; from 3.4 per cent to 13.9 per cent of the retail price of canned goods; 5 per cent of the value of transportation service; 4 per cent of the cost of a frame house; and 30 per cent of the cost of a steel bridge. The average proportion of the cost of steel to the price of the finished product is taken to be 10 per cent. Thus a 10 per cent reduction in the price of steel will be translated into a 1 per cent reduction in the price of the finished product. The elasticity of the demand for these finished products, of which steel is a component, is "possibly less than 1 or 2." Accordingly, a 10 per cent reduction in the price of steel will reduce the price of the product by 1 per cent and raise the sale of the product, and the consumption of steel, roughly by only one or 2 per cent: the demand for steel is very inelastic.[62]

The second study explores the elasticity of the demand for steel on the basis of a series of steel data for 1919-38.[63] The purpose is to correlate respectively production, shipment, and bookings of steel with such factors as the price of steel, general industrial activity, consumers' incomes, and industrial profits,[64] in order to test the relative strength of the impulses behind the demand for steel. The analysis is abstruse, with adjustments necessitated at each step and with assumptions and hypotheses erected upon assumptions and hypotheses. The final conclusion is that general industrial production, industrial profits and consumers' incomes exercise a primary influence on variations in the amount of steel sold, but that the price of steel is a minor factor; and that the elasticity of the demand for steel is only 0.3 or 0.4.[65]

Another study looks into the relation between output and costs, and subjects to econometric analysis the cost and output data of the U. S. Steel Corporation and its subsidiaries for 1927-38. To eliminate the influence on variation in costs of other factors than output, the total costs of each year were adjusted to the levels of prices of materials, wages, interest rates, taxes, and pensions prevailing in 1938; and since the corporation produces numerous different products, they were all reduced, by a scheme of weighting, to a homogeneous tonnage for each year. The scatter diagram for these annual adjusted costs and

[61] Hearings, Pt. 26, ***Iron and Steel Industry,*** p. 13589; and Exhibits nos. 1413-1415, ***ibid.,*** pp. 13981-14016.

[62] *Ibid.,* pp. 13592-93.

[63] *Ibid.,* pp. 13594, 13928.

[64] *Ibid.,* pp. 13594, 13921-22.

[65] *Ibid.,* p. 13927.

outputs is fitted by a straight line sloping to the left. This line points to results contrary to common understanding of the relative magnitudes of the fixed and variable costs of producing steel. The fixed costs are found to be only 182.1 million dollars a year, while the variable costs are as high as $55.73 per ton and are, moreover, constant per ton for a production capacity ranging from 18 to 90 per cent.[66]

The implication of these studies is clear: a reduction in the price of steel during a recession would serve little purpose except inflicting on the firm considerable losses. Specifically, even if the elasticity of the demand for steel is assumed to be unity, a 10 per cent reduction from the 1938 price of steel would occasion a loss of 43 million dollars, and would require a 48.8 per cent rise in production for the producer to break even.[67]

These studies have been criticized at each step by the experts for the committee,[68] but only a few points can be mentioned here. It was pointed out that the price elasticity of steel has been found low on the assumption that the other conditions are constant. But the increased steel output stimulated by a reduction in the price, especially if the reduction is substantial, would, by its impact on investment, employment, and income, encourage alike general business activity and the demand for steel, thus rendering this demand much more elastic. It was also indicated that a general revival of business is bound to arrive when several durable goods industries cut their prices simultaneously; that the use of annual data and weighted tonnage, covering up the varying characteristics of the individual products, tends to minimize the elasticity of demand;[69] and that the elasticity cannot be assumed to be constant for the period under study since it varies with the size of the price reduction, with the phase of the business cycle, and with the expectations of profits.[70] These criticisms have point, but it is doubtful that a price reduction in the steel industry alone can have a control-

[66] *Ibid.*, pp. 13595, 14034, 14051, 14065.

[67] *Ibid.*, pp. 13598, 13602-04, 14064-66.

[68] Hearings, Pts. 26 and 27, *Iron and Steel Industry*, testimony of L. Bean, M. G. de Chazeau, M. Ezekiel, M. Taitel, H. E. White, and W. B. Wooden, and the replies by T. O. Yntema.

[69] Hearings, Pt. 26, *Iron and Steel Industry*, pp. 13632-34.

[70] *Ibid.*, pp. 13635, 13671. The Federal Trade Commission's pamphlet on the basing point system makes an invalid deduction concerning the demand elasticity for steel. Referring to a statement by the U. S. Steel Corporation (*The Basing Point Problem*, monog. no. 42, pp. 46-47) that the demand for the steel of an individual producer is very elastic, since if he shades the price customers will readily shift to him, the pamphlet asserts, "It would seem impossible for an inelastic total demand to be built up out of a series of particular demands that are elastic" (monog. no. 42, p. 125). According to such a view, the total demand for wheat, or any other commodity under pure competition, is perfectly elastic.

ling effect on industrial activity. Also, a concerted price cut by several durable goods industries is apt to provide a strong stimulus indeed, but the suggestion is hardly a valid criticism of the corporation's argument.

More incisive are the criticisms of the cost-volume studies.[71] It is pointed out, among other things, that the income statements of the corporation for 1927-38 are not adapted to the purposes of a cost-output investigation; that the period is too short and, in the critical area on the scatter diagram, there are too few points to fit a reliable line of regression; that the fit on this scatter diagram may properly be curvilinear, pointing to higher fixed costs and lower variable costs; that the adjustment of the data is questionable here and there; that the weighted tonnage is a precarious concept although the technique employed is unimpeachable; that the costs of production are high on account of the possible inefficiency of the oversized corporation; and that the corporation may not typify the industry as a whole with regard to fixed and variable costs.

Doubt is imported from still another quarter. A careful study was made of the relation between the size of a shipment and the magnitude of price concessions in the steel industry, based on ample data for February 1939, supplied by the industry in response to a special questionnaire.[72] It is revealed that the price concessions mount strikingly with the size of the shipment.[73] Steel production in February 1939 was nearly 55 per cent of capacity, and at such capacity the proportion, in the U. S. Steel Corporation, of fixed costs to total costs is 25 per cent.[74] Since according to the corporation studies variable costs are constant and in this instance they amount to 75 per cent of total costs, it seems doubtful that, to get large orders, the industry could afford to diminish mill nets by one-half or more per ton—provided we emulate the corporation and imply that its costs are typical of the industry and that 1938 cost conditions argue for those of February 1939. According to this study, more plausible would be the explanation that variable costs are not constant, but decline as orders and output rise.[75]

In general, it is easy to agree with Dr. Isador Lubin when he remarked at the end of the Hearings on the corporation studies that "the same job might have been done by somebody equally well with a

[71] See footnote 68 above.

[72] *Price Discrimination in Steel*, monog. no. 41.

[73] *Ibid.*, pp. 8-26.

[74] See Hearings, Pt. 26, *Iron and Steel Industry*, p. 14058, Table 28.

[75] *Price Discrimination in Steel*, monog. no. 41, pp. 30-31.

different set of assumptions and different set of methods and gotten entirely different results."[76]

There is lastly the controversy over the basing point system, as warm and as indecisive as ever.[77] There is no intention here to join the lists, but a few remarks may not be out of place. The attitudes of the corporation and the Federal Trade Commission are a study in contrasts. The corporation pamphlet perceives noncompetitive conditions in the industry, but denies monopolistic practices. The Federal Trade Commission perceives monopolistic practices, but ignores the underlying noncompetitive conditions in the industry.

The corporation pamphlet makes much play of the idea that pure competition[78] is an abstraction not exemplified in the world of actuality, implying that the departure of steel from this abstraction is a normal occurrence in industry. The pamphlet does not recognize that, since the essence of pure competition is a price without an ingredient of monopoly, and since, equally, any such price situation is tantamount to pure competition, departures from pure competition betoken a degree of monopoly power.[79] The pamphlet consistently insists that the basing point system is the expression of competition, and nowhere is there mention of a trace of monopoly in the industry. In other words, pure competition is an abstraction, and yet the steel industry, denying the taint of monopoly, is the embodiment of the abstraction. The pamphlet, moreover, considers identical delivered prices as an index of competition. Identity of prices, however, may be associated with duopoly, oligopoly, price leadership, nonprice competition, collusion or pure competition. Only a scrutiny of the conditions producing the identity will reveal the substratum of competition or monopoly.

The claim is made, further, that the basing point system is the natural outgrowth of the unique circumstances describing the industry. This claim is inadequate if it means that, without collusion, the conditions of the industry prompted each steel firm to the basing point system as we know it; just as oligopolists may be induced independently to charge a monopoly price. The claim can at best imply that the basing point system is not the child of the desire of wayward people to be antisocial, but is rather, at least in part, an adjustment to a difficult situation. Analysis and recorded facts unite to suggest that the basing point system could not have emerged and could not endure without monopoly elements somewhere in the situation.[80]

[76] Hearings, Pt. 26, ***Iron and Steel Industry***, p. 13715.

[77] ***The Basing Point Problem***, monog. no. 42.

[78] "Perfect competition" is used, but the explanations indicate that pure competition is meant. See *ibid.*, pp. 43-44 and notes.

[79] *Ibid.*, *e.g.*, p. 45.

[80] *Cf. ibid.*, pp. 94-105, 107-109.

On the other hand, the insistence of the Federal Trade Commission on making the steel industry competitive by substituting mill base quotations for the basing point system forgets that the proposal, failing to eradicate the underlying features of the industry which engender monopoly, merely seeks to establish the semblance of competition without achieving the substance of it. It is evident that the steel industry is dominated by a few large corporations. It will not be possible to prevent those gatherings for "merriment and diversion" of which Adam Smith complains and at which high f.o.b mill prices can be set. Even without meetings, price leadership or the regard of each seller for the price and production reactions of the other sellers is calculated to institute monopolistic mill prices. Under competition only mill base prices govern; but not every situation in which mill base prices govern is competitive.

Other industries. Some attention was given at the Hearings to the beryllium[81] and liquor[82] industries, with emphasis on patents, the habitual practices of leading concerns, collusive price setting, and, in the case of liquor, the multitude of brands. There is also a monograph[83] summarizing an older investigation by the Federal Trade Commission of the natural gas industry, including natural gas pipe lines, with a few pages on aspects of inquiries by the commission into the agricultural implement and motor vehicle industries. This monograph, of rather poor composition, has little of arresting importance on price and production.

III—Retail Distribution

The position of the consumer. Obviously it was not the intention of the investigations to prepare a treatise on retailing, but scattered throughout the studies we meet problems belonging in this field. There is a volume of Hearings[84] on the plight of the consumer confused by the stress on brands and makes, by the tinselled catchwords and grandiose sales promotions.

The story is familiar. He is confronted in the city of Milwaukee with dozens of brands of canned milk, 142 brands of coffee, 95 brands of tomato juice, 225 brands of canned peas, 107 brands of peanut butter.[85] Tomato juice, according to another consumer witness, presented itself in one store in 21 different containers, 11 brands of varying sizes and

[81] Hearings, Pt. 5, *Monopolistic Practices in Industries; Development of the Beryllium Industry.*

[82] Hearings, Pt. 6, *Liquor Industry.*

[83] *Reports of the Federal Trade Commission,* monog. no. 36.

[84] Hearings, Pt. 8, *Problems of the Consumer.*

[85] *Ibid.,* p. 3312; *Consumer Standards,* monog. no. 24, p. 247.

volumes, and 15 different prices.[86] How to translate the diversity of quantity, quality and service into comparative price equivalence, for a rational choice, is a problem of calculus defying the knowledge and patience of the average consumer. Even simple products like salt and sugar come packaged, branded and advertised so that choice by price alone is precluded.

Brands and price are inadequate guides. German silver has no silver in it, and French ivory is not ivory. Like the Holy Roman Empire to Lord Bryce, French linen is neither French nor linen. "Beaverette" means rabbit skin.[87] The Bureau of Agricultural Economics tested samples of brands of canned fruits and vegetables; and the more specimens of a given brand were tested, the greater was the variation in the grades of quality.[88] Different brands or types of apparel, tires, bedding, drugs or desks are of identical quality but sell at different prices.[89] Higher priced milk has been found to be no better than lower priced milk; and better goods sell at lower prices than inferior goods. The consumer is victimized by false certificates and testimonials, by spurious experts and foundations, and by publications alleging that advertisements in them are trustworthy.[90] How representative such examples are of business practices it is hard to tell. Witnesses and writers are prone to cite outstanding cases; and the investigations under consideration probably do not give a balanced picture.

Proper buying demands calculation and experimentation. Large business concerns and institutions like hospitals and universities employ expert buyers. But a major proportion of the world's buying for the consumer's utility is done by the housewife, who, as Professor Wesley Mitchell once remarked, "is not selected for her efficiency as a manager, is not dismissed for inefficiency, and has small chance of extending her sway over other households if she proved capable."[91] A large monograph is devoted to the problem,[92] but the emphasis falls on providing an exhaustive inventory of the organization and activities of government and private agencies for testing products, procuring their own needs, and directly or indirectly helping the consumer. There is insufficient

[86] Hearings, Pt. 8, *Problems of the Consumer*, pp. 3346 *ff*.

[87] *Ibid.*, p. 3310.

[88] *Ibid.*, p. 3316.

[89] *Ibid.*, pp. 3330 *ff*.; *Price Behavior and Business Policy*, monog. no. 1, pp. 77, 80-81, 369, 376; Hearings, Pt. 21, *War and Prices*, p. 11173.

[90] Hearings, Pt. 8, *Problems of the Consumer*, pp. 3379 *ff*.

[91] *Business Cycles* (New York, 1927), p. 165.

[92] *Consumer Standards*, monog. no. 24. *Cf*. the very inadequate monog. no. 34 (*Control of Unfair Competitive Practices through Trade Practice Conference Procedure of the Federal Trade Commission*).

integration and evaluation of what is being done for the wayfaring consumer by private agencies, by general education, and by the Federal Trade Commission, and there is a somewhat inadequate analysis of what remains to be done for a greater accomplishment. Recommendations run in the following terms: an investigation of the agencies which rate commodities; a study of the effects of resale price maintenance legislation; standardization and labeling of goods; and a government agency of consumer service.[93]

Chain stores. In his monograph on the food industries Dr. A. C. Hoffman summarizes various studies on food chains. Several investigations confirm the view that chain prices in food are distinctly below those in independent stores although this does not necessarily hold of each particular article. Individual chain stores are allowed to depart from the set rules pertaining to mark-ups, for the purpose of meeting local conditions, and a price war may be initiated to crowd out an independent. The emphasis is commonly on price appeal; but there are instances of nonprice competition in the form of advertising and impressive buildings. Prices are flexible, more so in staple goods than in specialties.[94]

The Federal Trade Commission charges that chain mass buyers browbeat the sellers and small processors into unwarranted price concessions and allowances; that they employ the "loss leader" device; and that they pay lower wages than independents do. Dr. Hoffman stresses, and quite properly, such factors as the superior efficiency of management in chain stores, division of labor and specialization of functions, large scale buying and selling, the integration of wholesaling and retailing, and the employment of modern methods generally, all contributing to greater productivity and lower costs. He disposes of the low wage argument by indicating that the sample on which it is based is alike small and unrepresentative.[95]

The question whether prices and margins in retailing in general are competitive receives considerable discussion, and the conclusion is that the retail trade is competitive. Dr. Wilcox[96] offers several lines of evidence in favor of this thesis: the large number of retail units in relation to the population in cities large and small; the very small size of trading establishments, although there is a degree of concentration; the competition of mail order houses, chains, department stores, independent

[93] Hearings, Pt. 8, *Problems of the Consumer*, p. 3454; *Consumer Standards*, monog. no. 24, chap. 8.

[94] *Large-Scale Organization in the Food Industries*, monog. no. 35, pp. 60-62, 71, 101-03, 113.

[95] *Ibid.*, chap. 7 and pp. 103-07.

[96] *Competition and Monopoly in American Industry*, monog. no. 21, pp. 54-59.

retailers, consumers' coöperatives, etc.; free entry, in view of the small requirements of capital and experience; unusually low earnings for the trade as a whole, although the large corporations reveal high earnings; and a high rate of mortality.

The evidence is impressive, but a caution or two may be pertinent. The presence of large numbers is deceptive. Retailing is uniquely a matter of local markets, and local markets may be noncompetitive, as Dr. Wilcox realizes when he states, on another page,[97] that the presence of many sellers locally or nationally, "affords no guarantee that active competition will prevail." Retailing exemplifies differentiation of product with free entry, overinvestment and undercapacity, yielding a monopoly price without, however, a monopoly profit. Further, the low earnings of the trade as a whole may reflect, at least partly, inefficiency, old-time methods, and small scale operations translated into low productivity and high costs of rendering the service.[98]

Dr. Hoffman argues similarly and more extensively to the effect that food chains are competitive concerns. Among the several indicia of monopoly which he examines is the consideration that the sales of the chains constitute a smaller percentage of total sales for the country than is true with regard to concentration in manufacturing industries.[99] It may be observed, however, that inasmuch as there are many villages in the country without food chains, the small percentage is an underestimation: it would rise if the total sales included only those in places where chain stores operate. Moreover, percentages of totals for the country are at times misleading. We saw in connection with the milk industry that, while the two leading distributors together controlled a very small percentage of the total, various large cities were subject to oligopolies. The same situation pertains to other products.[100] It is noteworthy, too, that in food retailing, as in retailing generally, the frequently meager pursed, inexperienced tradesman can hardly meet the chain store prices. Between the costs of the chain stores and the prices charged by the independents there is an area within which the chain store in given localities can exercise a degree of price policy. Stated otherwise, the product and price of the chain store do not encounter in the product and price of the independent a very close substitute. This remark also applies to Dr. Wilcox's and Dr. Hoffman's[101] stress on ease of entry: the inefficient small newcomer is hardly an effective competitive threat to the chain.

[97] *Ibid.*, p. 280.

[98] *Cf. Problems of Small Business*, monog. no. 17, pp. 109-10.

[99] *Large Scale Organization in Food Industries*, monog. no. 35, chap. 9.

[100] *Competition and Monopoly in American Industry*, monog. no. 21, p. 111

[101] *Large-Scale Organization in the Food Industries*, monog. no. 35, p. 86.

One may demur as well to Dr. Hoffman's criterion of profits.[102] The profits of the five largest food chains have been unusually high—over 25 per cent on the investment (including long-term debts) in 1926, and declining to over 11 per cent in 1934-36. The full weight of Dr. Hoffman's contention falls on the consideration that, as the chains grew in percentage of the country's business, their rate of profit steadily declined. To him this fact suggests that "exorbitant chain-store profits must have some other explanation" than monopoly. There may be some other explanation, but the inevitability of the deduction may be questioned. One might suggest that under the pressure of investigations, public opinion, and antichain legislation the chains may have been induced to moderate the exploitation of their monopoly advantage. One would also have to be certain that there had been no overcapitalization, no profit concealment, and no change in other effective circumstances. The question relating to the degree of competition or monopoly in food chains awaits further study.

The drug trade. A careful statistical investigation is presented of retail prices in the drug trade, comprising drugs, toiletries and sundries.[103] In this sphere nonprice competition dominates the picture, and the consumer is so much in the dark about the utilities of the articles that a price considerably below the customary level arouses his suspicion regarding their quality. A chain store offered its own brand of aspirin at 19 cents for a hundred tablets whereas the prices of the best known brands varied from 59 to 75 cents. The public bought very little of the chain store product; but when the price was raised to 49 cents the volume of sales expanded greatly (p. 351). In this trade products identical in all essential regards command widely different prices, frequently out of all relation to cost of manufacture; and there are fluctuating deviations from the list prices among the stores. As is to be expected, small independent druggists in outlying districts charge higher prices for well-known advertised goods than large and conveniently located units.

The drug trade is preëminently subject to the resale price controls which have recently swept over the country, and there is impressive evidence that, but for the "fair trade" laws, the consumer would enjoy lower prices. After the Supreme Court decision in December 1936, upholding the constitutionality of resale price maintenance laws, many prices began to exhibit alike a narrower dispersion among stores and a higher average. Although many an independent drug store matches the prices of chain stores, the chain prices of nationally advertised merchandise commonly rank lower, even where price maintenance ap-

[102] *Ibid.*, p. 96.

[103] *Price Behavior and Business Policy*, monog. no. 1, Pt. 3.

plies, although after the appearance of price maintenance laws price cutting by chains diminished perceptibly. As one would expect, the price range of widely advertised brands exceeds the prices of less known private brands or of unbranded goods of the same quality, but the magnitude of the differentials is often striking indeed (pp. 369-71, 80). With the expansion of "fair trade" legislation some of the large distributors, like department stores in New York City, began to advertise the savings to the consumer purchasing private brands. There is also evidence, however, that some large units, content with the substantial margins of price-maintained products, lost the incentive to push their own brands.

Price-lines. There is finally an interesting account of an infrequently mentioned type of nonprice competition, price-lines.[104] In women's apparel, radios, vacuum cleaners, refrigerators and other goods, the quotations of different companies cluster about definite prices, sanctioned by custom, with arbitrary intervals in the series. Thus the prices of a certain type of girdle will run at $2.95, $2.98, $3.39, $3.50, $3.59, $3.95, and so on, with the greatest frequency of sales at $3.50 and $5.00. Sellers will quote the same prices, but will compete in style, material and workmanship. Some manufacturers of women's dresses will specialize as a $10.75 house or a $14.75 house. Even in a depression, unless there is a great shake-up, the price-lines hold firm, and better material and craftsmanship are put into the article; or else, when possible, the size is increased.

IV—Concluding Observations

As far as the T.N.E.C. investigations relate to price and production policy, it may be said that, aside from new data here and there and an occasionally interesting viewpoint and aside from the testimony by experts, especially on the construction and steel industries, the Hearings are verbose, repetitive, and descriptive; and that the monographs, while containing much fresh statistical exploration, are in the main bent on summary rather than analysis. The ratio of ore to metal is high.[105] None the less the cumulative effect of the panorama of problems presented on the numerous pages is bound to stimulate generalizations and questions which will doubtless vary with the reader. The present reader ventures the following observations.

One, the traditional belief that self-interest begets competition does

[104] *Ibid.*, pp. 70-75, 102-03, 242-51, 382-84.

[105] These remarks are far from predicting a career of limited usefulness for the T.N.E.C. publications. On the contrary, one may be confident that for years to come scholar and layman alike will turn to this rich storehouse of information, which bids fair to outrank the Report of the Industrial Commission.

not seem to accord with actuality. Self-interest seeks the maximization of revenue, and this often implies what Adam Smith called the monopolizing spirit. Competition is not the life of trade; and when circumstances permit monopoly advantage is sought even by the small manufacturer, the village store keeper, and the man in overalls. Monopoly is not the unique sin of big business; nor is it the peculiar attribute of modern days.

Two, competition does not always typify a smooth adjustment by rhythmic oscillations toward a beneficent equilibrium. The experience in agriculture, crude oil, and fluid milk seems to suggest that competition may be associated with disorder and distress. To avoid the pains of adjustment, there must be mobility of resources; that is, pure competition must also be perfect competition. Competition, however, postulates many sellers, and where many people are involved varieties of obstacles are likely to present themselves to their mobility. Thus competition is not apt to be perfect, and, instead of symbolizing ready adjustment, may offer painful economic (and political) problems before a transition has been made.

Three, various sectors of our economy exemplify the sort of monopolistic competition that offers the buyers good alternatives in price and quality and, accordingly, approximate competition closely enough for practical purposes so that an attempt to make the approximation closer, by social policy, may not be worth the effort.

Four, we need to explore more categories of markets. The classification of pure competition, product differentiation, and oligopoly is superior to the old dualism of competition and monopoly. Nevertheless, the diversity of market situations seems to demand a more extended classification and analysis of basic market patterns.

Five, with the dominance of advertising, salesmanship, and product differentiation generally, consumer utility becomes a concept more puzzling than before. Economics teaches that consumer utility governs the optimum allocation of resources, under competition. But when consumers' choices are largely governed by advertising producers, the maximization of utility assumes a new complexion, and the tenet that the consumer is the ultimate sovereign over the producer's moves may need revision. If we decide to accept consumer choices as primary economic data without regard to the antecedent utility calculations, the query arises as to what constitutes the aim of an economy, what it seeks to maximize, and what is the paramount criterion by which we can judge one economic system as against another. The concept of utility is pivotal and cannot be eliminated.

Six, the insistence on establishing competition in various sections of our economy may often face a dilemma. If the advantages of large size

are to be achieved, many industries will be dominated by small numbers. If the industry is atomized into many firms, the result may be the inefficiency of small size compounded with the possible disorder of competition, if the product is homogeneous. If the product is differentiated, the presence of many firms may symbolize overinvestment, undercapacity, and a high price although without a monopoly profit.

Seven, we need to reformulate our attitude to public policy with regard to price and production. The nineteenth century accepted *laissez-faire*. In the first quarter of the present century many seemed to be content with the antitrust laws, if properly enforced. Then came the new formulations of the theory of competition and monopoly. Where do we stand now?

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SAVINGS AND INVESTMENT: PROFITS *VS.* PROSPERITY?

By Moses Abramovitz

Introduction

The investigations of the Temporary National Economic Committee are a momentous work. They are the product of a mood of deep despair over both the justice and the efficiency of our economic arrangements. The information compiled in the Hearings and monographs, though much of it is neither new nor even improved, is a telling indictment in its general effect. There can be little doubt that, in the hands of a powerful party representing the interests of workers and farmers, this official portrait of our economy would be a powerful, perhaps decisive, political instrument of reform. Even in the confused political organization of this country it would not, in times of peace, have been without effect. It is clear, however, that the committee completed its work at a time when the country is particularly unready to use it. In the circumstances, it is perhaps not merely excusable but even desirable to treat it, not as the political document which it was meant to be, but as a set of academic materials, to ask what information it contributes to our knowledge of the economy, what general policies seem implicit in the analysis of the monographs and the testimony of the witnesses, and how well these policies fit the problems of the economy as these are now best conceived.

The particular aspects of these problems to which this essay directs itself are those especially connected with our current processes of saving and investment. And on these points, as no doubt on others, it is not an easy job considered from the point of view of scientific advance to reap the fruits of all the labor. Witnesses naturally considered their function to be that of elucidating the simpler facts in the simplest style. Analysis is often distorted to avoid difficulty. Suggestions of policy are left implicit to avoid prejudicing the authority of factual testimony. While the authors of the monographs felt somewhat freer to deal with the complexities of their subjects, their status in the civil service enjoined a still more cautious approach to policy. The final recommendations of the committee are hardly consistent with the scope of the testimony taken or the problems raised.

All this is, no doubt, inherent in the political process of which these materials are a by-product. From the point of view of their contributions to our knowledge, a narrow review of what was said and written, of what should have been treated but was not, would be not only ex-

hausting but also unprofitable. It is better to emphasize the contributions and forget about the failings.

From this point of view some organization is necessary. The most convenient standpoint from which to take departure is the Keynesian convention: Income = Consumption + Investment. Our problems then are: What factors determine the levels of consumption and investment? These problems are broad enough to include all that is relevant in our materials and are, in fact, the point of view from which the relevant monographs and testimony proceed. The character of our materials also makes it convenient to divide the factors bearing on investment into two classes, those dealing with the "rate of interest" (for which we ought to read: "all matters affecting the cost of financing"), and all other conditions determining the attractiveness of investment.

One further bit of cross-classification seems necessary. Our interest runs toward two aspects of national income, its level and its fluctuations. We wish to raise the level and to increase its stability. We would not wish to accomplish our desires in one direction at too great a cost in the other. And, of course, these two aspects of national income are intimately connected causally. In particular, the risks attendant on instability tend to reduce the general attractiveness of investment and thus the general level of national income. Thus, attempts to attain a higher level of income at the expense of stability may defeat their own purpose; and, contrariwise, measures which promote stability and do not directly prejudice the level of income are likely to act to raise it because they reduce the risks attendant on investment.

From an analytical standpoint, moreover, there is a strong tendency —too often exemplified in the T.N.E.C. materials—to infer the characteristics attendant upon certain long-run levels of income from data inherently cyclical in character. One cannot judge with any accuracy how much more people tend to save or invest during a decade when the national income stands at an average level of 87 billion dollars than when it stands at 43 billion dollars by comparing 1929 with 1932. All these considerations urge the necessity of keeping the two problems in mind, both in their divergences and in their parallelisms. Throughout the essay, therefore, we shall ask what the conditions under review portend not only for the level of activity but also for its stability.

I. The Relation between Income and Savings

From the point of view of maintaining a national income of satisfactory size, studies must ask: how much will the community desire to save when the national income is high? The critical statistic is the average propensity to consume. From the point of view of the stability

of income, one wants to know how sensitive is expenditure to a change in income. The question is: How much less will people spend if their income falls by a dollar? The critical statistic is the marginal propensity to consume. These two characteristics of the relation between income and savings are fundamentally distinct and independent.

A community which is able to obtain a high income because its desire to spend at such a level of income is very strong is not necessarily an economy which will resist the impact of forces making for reduced income flows. If the community tends to save but a small amount, but to cling tenaciously to that volume of savings, its rate of expenditure will in fact be very sensitive to reductions in income. It is essential, therefore, to deal with the two problems separately.

1. *The Level of Income and the Level of Savings*

Our interest centers in two questions: How much is the community likely to try to save at high levels of income; and why does it try to save so much? The first question was of major concern to Professor Hansen[1] and to Dr. Currie[2] in their testimony and to Dr. Altman[3] in his monograph. All these witnesses used Dr. Kuznets's well-known estimates of national income and capital formation as the basis of their observations. The witnesses were naturally at a disadvantage for lack of data running over more than the last two decades, years marked by an unparalleled depression which carried income down to levels involving negative saving. For lack of better materials, recourse was had to annual comparisons and conclusions were necessarily limited to pointing out the general order of magnitude of savings associated with levels of national income which furnished "reasonably full" employment. Thus, Professor Hansen used an average of the years 1923-29[4] and Dr. Currie, an average of the years 1923-28[5] to indicate the level of savings associated with high prosperity. In the period, gross savings amounted to about 19 per cent of gross national income. While the witnesses ventured no definite predictions, they thought it worth while to hold out this ratio as a useful basis for calculating the rate of saving likely to accompany satisfactorily high levels of nationl income in the future.

The witnesses make it clear, however, that factors other than the size

[1] *Investigation of Concentration of Economic Power,* Hearings before the Temporary National Economic Committee, 76th Cong., 1st sess., May, 1939, on Pub. Res. 113 (75th Cong.). Pt. 9, *Savings and Investment* (Washington, Supt. Docs., 1940), pp. 3500 *ff.*

[2] *Ibid.,* pp. 3536 *ff.*

[3] O. L. Altman, *Saving, Investment, and National Income,* T.N.E.C. monog. no. 37 (Washington, Supt. Docs., 1941).

[4] Hearings, Pt. 9, *Savings and Investment,* p. 3498.

[5] *Ibid.,* p. 3537.

of the national income have an important bearing on the rate of saving. Indeed, it is these other factors which provide the community with its opportunity for control. Without developing their analysis systematically, they nevertheless point out that our communal propensity to save is likely to vary directly with the degree of inequality in the distribution of income, the amount of profits earned by business, and the percentage of such profits retained by enterprises, and, inversely, with the size of capital gains, the weight of taxation, and the degree to which taxes are borne by the relatively rich.

Oscar Altman[6] uses the familiar materials of the National Resources Committee study, ***Consumer Expenditures in the United States 1935-36***, to emphasize the importance of inequality in income distribution. The showing of the committee's data on the relation between the income and savings of American consumers at various income levels is striking. In the year studied it appears that the 59 per cent of our families earning less than $1,250 spent more than they earned while the 2.3 per cent of our families earning over $5,000 saved 79 per cent of the 6 billion dollars saved in that year by individuals. Families having incomes between $5,000 and $10,000 saved, on the average, 30 per cent of their income. But families earning over $20,000, who were less than .3 per cent of all families, saved 50 per cent of their income and accounted for nearly 40 per cent of the total saved by individuals. The average income of all families in the same year was almost exactly $1,500. A rough estimate of the saving which would have been done by individuals if all families had received this average income is 1.8 billion dollars.[7] The actual saving apparently effected came to 5.9 billion dollars.

Adolph J. Goldenthal[8] attempted to estimate the aggregate income earned by the most fortunate one per cent of income receivers. His figures included capital gains and losses in income. But a rearrangement of his data by Dr. Altman[9] provides us with figures excluding capital gains and reveals that the highest one per cent of income recipients received 13 per cent of total individual incomes on the average during the years 1918-37. Moreover, the percentage of income earned by this highest income bracket was remarkably stable, varying between 11.6 per cent in 1920 and 14.3 per cent in 1928.[10]

[6] *Saving, Investment, and National Income,* monog. no. 37, pp. 16-17.

[7] Calculated by the present writer by applying to the total income of all families, as determined by the Consumer Expenditure Study, the average percentage of income saved by the two income groups, $1,250-$1,500 and $1,500-$1,750.

[8] *Concentration and Composition of Individual Incomes, 1918-1937,* monog. no. 4.

[9] *Saving, Investment, and National Income,* monog. no. 37, p. 18.

[10] These percentages are probably an underestimate of the share of the highest one per cent of income receivers. Mr. Goldenthal was unable to estimate the total income received by individuals with the highest economic incomes. His dependence upon Treasury materials

Mr. Goldenthal also presents extremely interesting information on the sources of inequality in the distribution of incomes. He finds that, while compensation for personal services accounted for 83 per cent of all income received by individuals, and income from property for but 17 per cent during the years 1931 to 1935, the highest one per cent of all income receivers secured 49 per cent of their income because of their ownership of property and earned only 51 per cent by "personal service,"[11] a category which is taken to include the total earnings of the owners of unincorporated concerns. Thirty-seven per cent of all income from property during these years went to the highest one per cent of income receivers. Of greatest importance in accounting for the property income of this richest group is its dividend roll. Some 60 per cent of all its income from property came to this topmost income bracket in the form of corporate dividends; and this group received an even higher proportion of all dividends than of property income as a whole: 63 per cent against 37 per cent.

Dividends then play a notable part in giving the members of our highest income bracket the disproportionate share of our total income which they receive. But dividends are even more important in accounting for differences of income within this sparsely populated region. Martin Taitel[12] provides the figures for all federal income taxpayers, as shown in Table I.

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forced him instead to estimate the total incomes of the one per cent of income receivers who obtained the highest *statutory net* incomes. Statutory net income differs from a more relevant definition of income by including capital gains and losses and by excluding contributions, certain taxes paid, tax exempt interest on government securities, and certain other minor items. Hence, it is clear, as Mr. Goldenthal points out, that "the proportion of total economic income received by individuals with the highest statutory net incomes would obviously be somewhat less than the proportion of total economic income received by those with the highest economic income."

[11] The years 1932 and 1933 are omitted from the data. Capital gains were excluded from total income and income from property by the present writer. Savings of individual entrepreneurs and of partnerships not withdrawn from their businesses are included by Mr. Goldenthal in individual incomes. The figures presented in the text are based on Table 10, p. 37, and Table 12, p. 39, of Mr. Goldenthal's monograph (no. 4, *Concentration and Composition of Individual Incomes, 1918-1937*).

A possible distortion of the shares of total income accounted for by personal services and property respectively in different income brackets may possibly inhere in the fact that, in Mr. Goldenthal's classification, entrepreneurial incomes are considered to be a return to personal services alone. It seems unlikely, however, that this can be of great importance. Figures presented by Mr. Goldenthal (*ibid.*, p. 48) make it clear that entrepreneurial incomes accounted for less than 20 per cent of total income for both income recipients earning more than $5,000 and those earning less than $5,000 and that the shares of total income accounted for by entrepreneurial earnings in the two groups did not differ by more than two percentage points in any of the four years, 1926, 1929, 1932 and 1935, for which data are presented. Moreover, only part of the total earnings of entrepreneurs can be attributed to their capital investments.

[12] *Profits, Productive Activities and New Investment*, monog. no. 12, p. 53.

Perhaps the most significant information in the table appears in the last column. These data indicate that even at the lower levels of taxpayers' incomes, substantial portions of the difference between the average incomes of successively higher brackets are due to differences in the amount of dividends received. Above the $50,000 level over one-half of the difference is attributable to dividends, and this ratio becomes even higher as incomes rise. Figures for 1932 and 1929 exhibited similar characteristics.

TABLE I—APPROXIMATE RELATION BETWEEN GROSS INCOME AND DIVIDEND RECEIPTS: 1936

Average gross income	Dividend receipts		Difference between successive average gross incomes	
	Approximate average	Percentage of gross income	Amount	Percentage accounted for by dividend receipts
$ 2,400	$ 125	5.2	—	—
5,000	551	11.0	$ 2,589	16.5
10,000	1,825	18.3	5,000	25.5
25,000	7,843	31.4	15,000	40.1
50,000	20,306	40.6	25,000	49.9
100,000	49,402	49.4	50,000	58.2
150,000	79,997	53.3	50,000	61.2
300,000	181,984	60.7	150,000	68.0
500,000	328,915	65.8	200,000	73.5
1,000,000	704,117	70.4	500,000	75.0

The rich, however, are not rich because of the direct yield of their property alone. As much of their income comes to them in the form of salaries and fees (31 per cent) as comes in the form of dividends (30 per cent).[13] In 1929, when the average income receiver earned about $1,150 in the form of wages and salaries, the comparable figure for the highest one per cent of our income receivers was $6,859. In 1931 the comparable figures were $864 and $6,130. One would, however, be ingenuous indeed, if one thought of the "earned" income of the rich as substantially independent of their property income. The "pickings" as well as the profits of property are great. The relatively small group of men who receive the highest property incomes also control our corporations. When corporations make profits and furnish these men dividends, they also furnish a fund which makes possible the compensation of executives at high salaries, the payment of bonuses and the like. Indeed, the same thing is probably true if the corporations are merely

[13] The figures apply to the average of the years 1919-35, 1932 and 1933 being excluded. The calculations are based on *Concentration and Composition of Individual Incomes*, monog. no. 4, Tables 10 and 12.

big, even if unprofitable. Big and, more especially, profitable corporations can afford to pay extremely high fees for the services of fashionable and, no doubt, somewhat more skilled attorneys, accountants, and consulting engineers. Rich individuals can afford to pay their attorneys and physicians in the same liberal fashion. Finally, one may add that property income means the education and, even more, the connection and entrée which qualify individuals for the more lucrative positions in the economy. All this, of course, is not meant to belittle the real importance of sheer ability.

It is clear that the magnitude of property earnings, more especially of profits, is a critical determinant of the volume of individual savings. Profits, however, affect the savings of the community at still another point. When business makes profits it usually retains part of these net earnings either to finance its own purchases of capital goods or to increase its liquid assets. Dr. Altman used the Department of Commerce estimates of gross savings by nonfinancial enterprises and Dr. Kuznets's estimates of gross capital formation to indicate that, in two periods of relatively high income and high savings, 1925-29 and 1935-39, gross savings of business averaged 36 per cent and 35 per cent, respectively, of aggregate gross capital formation.[14]

Dr. Kuznets's recently published study of national income provides us with a convenient gauge of the importance of the net savings of business.[15] During the prosperous period 1919-28, incorporated and unincorporated business together accounted for more than 19 per cent of the net savings of the community. In the highly prosperous year 1929, the figure was 26 per cent. In the relatively depressed period, 1929-38, when corporate net earnings alone dropped to an average of 2.3 billion dollars a year from 4.9 billions in the earlier period, business enterprises dissaved at the rate of 2.3 billion dollars a year. Even in the relatively prosperous year 1937, when the community saved 6.4 billion dollars, business enterprises dissaved one billion dollars.

It is not easy from these figures to arrive at any definite impression of how important business savings are likely to be during the years of high prosperity. The latter twenties were quite exceptionally profitable years; even the payment of unprecedentedly high dividends did not prevent corporations from adding substantial amounts to surplus. The thirties, on the other hand, included the country's deepest depression. Moreover, when recovery came, profits failed to rise to anything like pre-depression levels. In 1937, the best of these years, net profits of corporations before taxes were not higher than in 1922 when our na-

[14] *Saving, Investment, and National Income,* monog. no. 37, p. 15.

[15] *National Income and Its Composition 1919-1938* (New York, Nat. Bur. of Econ. Research, 1941), Table 39, p. 276.

tional income was some 14 per cent smaller.[16] In addition, the short-lived but effective federal undistributed profits tax[17] probably forced the distribution of a considerable volume of corporate dividends which would otherwise have been retained. On balance, therefore, it seems a fair guess that future boom periods will see substantial savings by business enterprises, perhaps of the order of magnitude which characterized the twenties.

There is some question, however, about the accuracy with which the depreciation and depletion allowances actually charged by business truly measure the investments required to maintain capital intact. Professor Hansen[18] argues that a much smaller amount of replacement expenditures than the amounts actually charged to depreciation may be sufficient to maintain the productivity of the total capital stock. If this were so, the effective net savings of business required to be absorbed by investment intended to expand output would be considerably larger than the figures cited in the text above.

In support of his views Professor Hansen cites the fact that depreciation allowances are, in the ordinary course, used to provide improved machinery operated by more efficient techniques. Against this view one might stress the importance of the obsolescence which accompanies technological advance. The difficulty at bottom is a conceptual one. A useful definition of the amount of investment required to maintain capital intact may be quite different in an analysis of money flows and in other conceivable problems. One way out of these conceptual difficulties is to conceive of the savings-investment problem in gross terms alone. On this basis, of course, the importance of business savings is unquestionable.

Still another unresolved problem connected with business savings concerns the net reduction in the communal propensity to consume which might be effected by forcing a larger distribution of business profits. Although great stress was laid in both the testimony and monographs[19] upon the extent to which retention of earnings of business added to the savings of the community, no attempts were made to indicate what the net effect upon the community's saving was likely to be if earnings were distributed in greater volume.

The logic of the situation is, of course, such as to leave no doubt that,

[16] *Ibid.*, Table 37, p. 269.

[17] Some notion of the effect of the undistributed profits tax on the net savings of corporations may be gleaned from the fact that corporations dissaved 700 million dollars more in 1937 than in 1938 when the tax was reduced to nominal levels, although corporate profits fell from 3.5 billion dollars in 1937 to 2.8 billion dollars in 1938. *Ibid.*, table 22, p. 216.

[18] Hearings, Pt. 9, *Savings and Investment*, p. 3510.

[19] See especially the testimony of Oscar Altman, *ibid.*, pp. 3669-3702,

other things being equal, a reduction in business savings is likely to reduce the total savings of the community. The individuals to whom the profits of business are distributed are unlikely to save anything like the entire amount. This would be true even though the very rich secure most of the profits distributed. Still, a quantitative expression of the probable net reduction in savings is vital; for it is clear that if business is forced in somewhat greater measure to finance itself *via* the security markets, this constitutes some bar to investment. Unless the reduction of savings is greater than the probable reduction of investment, a more liberal distribution of profits would be of no benefit.

Paul Samuelson's study of this problem led him to estimate that a reduction of business savings of $1.00 was likely to cause individuals to increase their savings by about 20 cents.[20]

TABLE II—NATIONAL INCOME AND SAVINGS, 1919–28, 1929–38[a]

(All figures in billions of 1929 dollars)

Classification	Annual average	
	1919–28	1929–38
National income	68.6	71.1
Aggregate payments to individuals, excluding entrepreneurial savings	65.4	74.3
Savings by individuals	3.4	4.8
Savings by business	2.3	−3.2
Total private savings	5.7	1.6

[a] From *National Income 1919–1938* by Simon Kuznets, Occasional paper no. 2, National Bureau of Economic Research.

Somewhat less formal use of national income figures yields much the same impression. The figures below are abstracted from a recent paper by Simon Kuznets.

Although the national income in constant dollars was larger in the second decade than it was in the first, savings of individuals and business together were much smaller. The entire decline in savings is accounted for by the dissaving of business. A reduction of business savings of 6.4 billion dollars was accompanied by a reduction of total private savings of nearly as much (5 billion dollars). This occurred in spite of the fact that individual savings undoubtedly increased between the first decade and the second for reasons other than the decline in business savings. Although the share of income going to the richest

[20] See his note in Professor Hansen's *Fiscal Policy and Business Cycles*, pp. 250-60. Dr. Samuelson is skeptical about the value of these figures because of the high correlation between business savings and aggregate income payments to individuals.

section of the population was about the same in both decades,[21] aggregate income payments to individuals increased by about 14 per cent. Capital gains, which probably induce individuals to spend a larger proportion of their incomes than they otherwise would, fell from an annual average figure of 1,700 million dollars in the first decade to only 81 million dollars in the second decade, a comparison which probably greatly understates the decline.[22] The comparison, in sum, constitutes a rather telling bit of evidence in favor of the notion that a decline of business savings is likely to lead to a rather large comparative decline in total savings, other things being equal.

The last important component of savings is that done by governments. Dr. Altman indicates that during the prosperous period, 1925-29, governments accounted for 10 per cent of gross savings. On a net basis the share of governments' savings is considerably larger—22 per cent.[23] These figures emphasize the margin of control largely at the discretion of governments. Prosperous years in the future need not be characterized by such a large volume of investment as has marked them in the past, provided that a more enlightened control of fiscal policy prevails.

While inequality in the distribution of income is perhaps the most important cause of one great volume of individual savings, the distribution of income is particularly subject to modification through the medium of taxation. From this point of view, the character of our tax

[21] After deduction of federal income taxes, income receivers falling in the highest one per cent of the income distribution apparently obtained 12.2 per cent of all income received in the decade 1919-28. In the second decade the same group obtained 12.6 per cent of all income received by individuals.

The figures for this computation were derived in the following manner:

1. Income payments excluding capital gains but before income taxes, from S. Kuznets, *National Income 1919-1938* (Occasional paper no. 2, Nat. Bur. Econ. Research), Table 1, p. 7.

2. Incomes of the highest one per cent including capital gains and before taxes, from *Concentration and Composition of Individual Incomes,* monog. no. 4, Table 12, p. 39.

3. Capital gains of the highest one per cent, *loc. cit.,* except 1937, which was estimated by the present writer by applying the ratio of capital gains realized by the highest one per cent in 1936 to total capital gains in 1936 to Mr. Goldenthal's estimate of total capital gains in 1937. (*Ibid.,* Table 10, p. 37.)

4. Federal income taxes paid *in toto* and by the highest one per cent, *ibid.,* Table A-6, p. 98.

Inability to estimate the realized capital gains of individuals in 1931, 1932, and 1938 made it necessary to exclude these years from the second decade.

[22] The figures are computed from *Concentration and Composition of Individual Incomes,* monograph No. 4, Table 10, p. 37. The average for the second decade does not include the years 1931 and 1932, when it seems likely that capital losses were large, and 1938, when the capital gains, if any, were probably small. Changes in the income tax law make the figures for 1935, 1936, and 1937 understate the amount of capital gains to some degree, a fact which counterbalances to some extent the effect of the years omitted.

[23] Kuznets, *National Income and Its Composition,* Table 39, p. 276.

system is a critical determinant of our tendency to save. This is the subject of a particularly bold and suggestive monograph by Gerhard Colm and Helen Tarasov.[24] Working on a problem for which the materials are poor even as economic data go, the authors were yet courageous enough to attempt to approximate answers to relevant questions and not merely to those questions to which relatively accurate answers could be made. They attempt, in fact, to trace as accurately as poor material and the nature of the problem allow the incidence of all federal, state and local taxation upon the members of the various income size groups for the fiscal year 1939.

A preliminary allocation of taxes into two groups—those which are directly levied on consumption or may be presumed to be shifted to consumers, and those personal taxes which may be presumed to be paid by persons on whom they are levied—yields the highly interesting estimate that over 70 per cent of the total tax revenue in 1938-39 fell on consumption, while only 30 per cent took the form of personal levies which could not be shifted to others.[25] State and local taxation are, as is well known, more culpable in this respect than federal taxation, and it appears from Dr. Colm and Miss Tarasov's figures that over 85 per cent of state and local taxes are finally borne by consumers.

With all the caution required by their problem,[26] the authors present the following figures on the percentage which taxes are of income for various income groups.

It is apparent that whatever elements of progression existed in our pre-war tax system were found in the federal tax system alone, and even federal taxes only begin to be seriously progressive above the $10,000 income level. From the point of view of distributive justice, the reform of the American tax system still has far to go. It is clear, too, that progress in this direction will involve substantial inroads upon the volume of savings. Although Dr. Colm and Miss Tarasov do not venture estimates of the effect of an increase in the progressiveness of our tax system upon the volume of saving, their material was clearly organized to be relevant to that problem. This question will be discussed at some length in a later section of this paper.

[24] *Who Pays the Taxes?* monog. no. 3.

[25] This calculation is based on figures pieced together from various tables of *Who Pays the Taxes?* monog. no. 3. Following Dr. Colm and Miss Tarasov, taxes which are presumed to fall on consumers include employers' contributions to social security taxes, though these may well fall on labor, and taxes on all real estate improvements. Corporation income, excess profits, and stock taxes are assumed to fall on the income or equity of corporate shareholders and are, therefore, included among the nonshiftable personal taxes.

[26] It seemed impossible in a paper of this character even to begin to summarize the difficulties of estimation encountered by the authors in arriving at their final tables. Interested readers are referred to Dr. Colm and Miss Tarasov's own concise presentation.

From this review of the determinants of saving, the magnitude of profits emerges as of critical importance. When profits are large, business retains a substantial part of its net earnings, and these retained net earnings constitute a considerable part of all our savings. The dividends which business pays go in great part to the rich and form a substantial portion of their total income. And since the rich tend to save a very large portion of their incomes, dividends account for a much larger percentage of the community's savings than they do of the community's income. Finally, profits probably are the basis of a considerable portion of the nondividend receipts of the rich. By providing a surplus fund at the discretion of business directors, profits make possible the payment of extremely high salaries and bonuses to corporate officials and fees to the accountants, attorneys, and engineers who serve big business. As the source of a large part of the personal incomes of the rich, profits play the same rôle in making possible the incomes of the better paid physicians, attorneys and architects who serve rich individuals.

TABLE III—TAXES AS A PERCENTAGE OF CONSUMER INCOME: 1938–39

Income classes		Taxes as percentage of income			Savings as percentage of income
		Federal	State and local	Total	
I	Under $ 500	7.9	14.0	21.9	−24.3
II	$ 500– 1,000	6.6	11.4	18.0	− 2.0
III	1,000– 1,500	6.4	10.9	17.3	5.2
IV	1,500– 2,000	6.6	11.2	17.8	5.8
V	2,000– 3,000	6.4	11.1	17.5	9.6
VI	3,000– 5,000	7.0	10.6	17.6	16.8
VII	5,000–10,000	8.4	9.5	17.9	28.4
VIII	10,000–15,000	14.9	10.6	25.5	32.3
IX	15,000–20,000	19.8	11.9	31.7	32.3
X	20,000 and over	27.2	10.6	37.8	38.3
Total		9.2	11.0	20.2	11.4

Martin Taitel provides us with figures which allow us to secure some summary impression of the importance of profits in accounting for communal savings. He estimates, for a number of years between 1920 and 1937, the amount of savings effected out of corporate dividends by dividend receivers with incomes of more than five thousand 1935-36 dollars. His method involves the distribution of dividend payments by the income levels of the recipients and the use of the National Resources Committee 1935-36 estimates of the percentages of income saved at various income levels to estimate the amounts of dividends

saved.[27] Since savings out of dividends received by individuals with incomes of less than $5,000 were neglected, there can be little doubt that Mr. Taitel's figures do not exaggerate savings from this source. To these estimates we have only to add the sums saved by incorporated and unincorporated business to secure estimates of total savings from profits. For this purpose the present writer has utilized Dr. Kuznets's recent estimates of these magnitudes.[28]

Table IV presents estimates of savings from profits for four prosperous years, together with related information.

TABLE IV—ESTIMATES OF PROFITS AND OF SAVINGS FROM PROFITS
(In billions of dollars)

Classification	1925	1929	1936	1937
1. Savings from dividends[a]	1.4	2.0	1.1	1.2
2. Retained earnings of corporations[b]	0.8	1.5	−0.7	−1.4
3. Entrepreneurial savings[b]	1.6	1.1	1.2	0.4
4. Total savings from profits (Lines 1+2+3)	3.8	4.6	1.6	0.2
5. Total savings[b]	9.3	10.0	5.4	6.4
6. Percentage: savings from profits divided by total savings	41.0	46.0	29.6	3.1
7. Dividends[c]	4.4	6.3	4.8	4.9
8. Total "profits" (Lines 2+3+7)	6.8	8.9	5.3	3.9
9. National income[d]	76.0	87.2	62.9	70.5
10. Percentage: total profits divided by national income	8.9	10.2	8.4	5.5

[a] *Profits, Productive Activities and New Investment*, monog. no. 12, Table 14, p. 63.
[b] Kuznets, *National Income and Its Composition 1919–1938*, Table 39, p. 276.
[c] *Ibid.*, Table 70, p. 348.
[d] *Ibid.* Table 1, p. 137.

The figures above provide a striking illustration of the importance of profits in accounting for savings. Although profits form no more than 10 per cent of the national income in any of the years shown, they were apparently responsible for as much as 46 per cent of our total savings.[29] In 1937 the reverse is true, but the circumstances serve to emphasize the importance of the magnitude of profits in accounting for savings. In

[27] See *Profits, Productive Activities and New Investment*, monog. no. 12, chap. 6, sec. C, and chap. 7 for a detailed description of Mr. Taitel's methods.

[28] Mr. Taitel's own estimates of retained earnings were discarded because they were not adjusted to eliminate revaluations of assets.

[29] The estimates of total profits shown in Table IV possibly underestimate somewhat the magnitude which is relevant to our problem. Our estimate includes corporate dividends and the retained earnings of incorporated and unincorporated business. It does not include that part of entrepreneurial withdrawals which are properly profits. Consequently, our comparison of the difference between the proportion of national income and the proportion of savings accounted for by profits somewhat overstates the case.

that year, corporations maintained their dividends at the 1936 level although their profits fell by 15 per cent. The same condition must have been true of unincorporated business, judging from the reduction in entrepreneurial savings. As a result, business as a whole dissaved one billion dollars and savings from dividends failed to make up for this high rate of business dissaving.

The moral may be underscored by noting that, when profits change, a very large proportion of the change is likely to go into or come out of savings. If we total, without regard to sign, the three changes in profits between the four years shown in Table IV, we find that the sum, 7.1 billion dollars, is associated with changes in savings from profits which total 4.2 billion dollars. The associated changes in total savings were only 6.3 billion dollars.

All this is information of great interest. But its bearing upon our problem is less close than may at first appear. We are interested in estimating how much investment is likely to be necessary in order to *maintain* income at a high level. The figures we have reviewed tell us how large was the volume of savings when income stood temporarily at a cyclical peak. For various reasons the amount saved out of a given income produced at a cyclical peak is likely to be quite different from the amount the community is likely to save from the same income if this national dividend can be sustained for some time.

One important factor probably operates to make the propensity to save smaller at cyclical peaks than in the long run. During a business boom capital gains are apt to be large and to encourage people to spend more from a given income than they would otherwise be inclined to do. Another factor working in the same direction is the use of consumer credit. While their incomes are increasing people are inclined to add to their present consumption by anticipating future income. But if income is stabilized, the volume of consumer credit outstanding may also be expected to stop rising, other things being equal.

Other possibly more important factors work in the opposite direction. They serve to indicate that the savings associated with high incomes, if the latter are maintained, will be smaller than is suggested by the figures we have reviewed. It seems plausible to suppose that consumption standards lag behind income. It takes time for people of given earnings to discover the opportunities which larger incomes afford, time to rearrange their situations to make full use of these opportunities, and time for the conventions of the group to impose their sway upon the recalcitrant. But possibly more important than any of these considerations is the fact that the profits earned in the production of a high level of income are likely to become smaller the longer that level of income is maintained. Profits are high at cyclical peaks in good part

because a high level of income has been reached only a short time after the community had known a low level. Except in cases where competition is virtually absent and entrance to an industry barred, the rivalry of existing firms and the entrance of new firms should lead to sufficient plant expansions to cause a substantial reduction in the volume of profits. Moreover, of the profits which are earned, business is less likely to retain so large a fraction since the urgency to provide reserves for a coming depression is reduced.

One can only speculate about the relative importance of these factors and about the possibility that other factors equally cogent have been overlooked. It is clear, however, that we know little as yet about the volume of investment required to maintain a given level of national income.

2. *Changes in Income and Changes in Savings*

Although the work here under review is based upon statistical materials which represent observations of a period marked by violent cyclical changes and although the data used were reported at relatively frequent intervals (annually), attention was almost entirely directed to the level of savings associated with high income. Beyond cursory remarks about the possibility that savings are likely to increase more rapidly than income as the country emerges from a deep depression,[30] no attention was given to the sensitivity of savings to changes in income. Material of the sort we have reviewed, however, is able to cast some light upon this problem.

For example, Rollin Bennett,[31] working with Harold Barger's quarterly estimates of income and consumption in constant prices for the years 1921 to 1938, found that a $1.00 increase of income was accompanied on the average by an increase of savings of approximately 37 cents. Paul Samuelson[32] presented estimates of the same sort based upon annual data in constant prices adjusted for changes in population. He found that a $1.00 increase of national income was accompanied by increased savings of 46 cents on the average.

[30] Compare the testimony of Lauchlin Currie, Hearings, Pt. 9, *Savings and Investment*, p. 3537.

[31] "The Significance of International Transactions in the National Income," *Studies in Income and Wealth*, Vol. 4 (New York, Nat. Bur. of Econ. Research, 1941). Mr. Barger's estimates on which these calculations were based will appear in a forthcoming publication of the National Bureau of Economic Research. Believing that the corporate profits which influence consumer expenditures are probably profits as reported rather than as adjusted for capital gains, Mr. Bennett used income figures before revaluation of assets.

[32] See, Hansen, *op. cit.*, p. 253. Dr. Samuelson used Dr. Kuznets's data as presented in *National Income and Capital Formation*, from 1921 to 1935 and estimates of the National Resources Planning Board from 1936 to 1939.

These results indicate a very high degree of sensitivity of savings to changes in income. Conversely, they indicate that, so far as our savings habits go, the forces making for stability of income are very strong.[33] This source of resistance to cyclical fluctuations, however, appears to depend to a much greater extent upon the reaction of business savings to a change in national income than upon the responses of individuals.

The present writer has estimated that business savings accounted for 38 per cent of the changes in net savings between peaks and troughs and troughs and peaks of business cycles between 1919 and 1938, while private savings accounted for but 26 per cent. The balance of the changes in savings was due to the action of governments.[34] The difference in the sensitivity of these various components of savings to changes in national income is emphasized by the fact that the average annual savings of business over the period as a whole was virtually zero while individuals saved, on the average, 4.2 billion dollars a year and governments about 700 million dollars.

Paul Samuelson[35] has attempted a more elaborate estimate of the same magnitudes with even more striking results. He studied the relation between consumption and aggregate income payments to individuals by years between 1921 and 1935[36] and found that, on the average, virtually the whole of every dollar of incremental income tended to be spent. The entire increase of savings associated with increases of income tended to take the form of business or governmental savings. The relation between total business savings and the national income produced yielded an extremely high marginal propensity to save—49 cents out of every $1.00 increase of income.

Dr. Samuelson considered that some part of the high degree of sensitivity of individual consumption to increases of individual income was due to business savings. Individuals may fail to increase their savings in part because business does it for them. He therefore attempted to discover the relation between consumption and aggregate income payments to individuals after allowing for changes in business savings. His results, presented with great diffidence because of the high degree

[33] The results of still other estimates of the propensity to save in the United States are summarized in Colin Clark's *The Conditions of Economic Progress*. Four different methods yielded results ranging from 30 to 33 cents of savings with each dollar of income increase, figures somewhat lower than those cited in the text.

[34] These figures are based upon Dr. Kuznets's estimates of savings as presented in *National Income and Its Composition 1919-1938*, Table 39, p. 276. The reference dates of the National Bureau of Economic Research were used to mark peaks and troughs of business cycles.

[35] See Hansen, *op. cit.*, pp. 255 *ff*.

[36] Again Dr. Samuelson's figures were drawn from S. Kuznets, *National Income and Capital Formation*. They are corrected for changes in the cost of living and in population.

of intercorrelation among the factors, indicated that if business savings did not vary from their level in 1929, individuals would raise their savings by about 19 cents when their incomes increased by $1.00. An increase of enterprise savings of $1.00 increases consumption by 23 cents.[37]

If these calculations are anywhere near the mark, then it would appear that a large part of such resistance to cyclical changes as is found in our economy consists in the fluctuation of business savings. The real objection to undistributed profits taxation may be found less in the fact that it constitutes a hindrance to the financing of small business than in the fact that it would tend to increase the violence of cyclical fluctuations.

II. The Inducement to Investment

The factors which determine the volume of investment can be grouped into two classes: those bearing on the profitability of investment, and those influencing the costs of securing the necessary resources. This section will deal with the first of these groups.

The testimony of Professor Hansen and Dr. Currie included statistical material and analysis relevant to the problem of stimulating a greater rate of investment.[38] Dr. Altman's monograph bore in part on the same question. Our review of the materials and analyses they offered properly starts with a statement of the country's position as they saw it at the time they testified and wrote.

Our recent record in the production of national income, they pointed out, has not been as good as it was in the past. Whether we calculate national income upon a net basis or a gross basis, in current values or in constant values, its level in 1937—the most recent pre-war peak year—fell short of its level in 1929. Since our population was larger in 1937 than in 1929, the drop in income per capita was even greater. Moreover, unemployment was probably far more serious in 1937 than in 1929 though here, of course, statistics are notoriously poor.

This decline in national income was associated with, and in a significant sense no doubt caused by, a far larger decline in the rate of capital formation. While net national income in 1929 prices dropped 7.2 per cent between 1929 and 1937, net capital formation declined

[37] Presumably the circumstances under which a hypothetical reduction of business savings occurs would have some bearing upon the results. A decline of business savings which reflects a reduction of profits and implies, at a given level of income produced, an increase in the amount distributed as costs of production would be likely to have a different effect upon consumption than would the same reduction if caused by an increase in profits distributed.

[38] Hearings, Pt. 9, *Savings and Investment.*

nearly 37 per cent.[39] On a gross basis national income fell 5.6 per cent, while capital formation decreased 10.3 per cent.

Professor Hansen and Dr. Currie undertook a statistical analysis of the sources of this decline of investment. Dr. Currie's breakdown of his estimates of "income producing expenditures which offset saving," a slightly modified version of the gross investment magnitude, is most convenient for this purpose. Table V provides the gist of his findings.

TABLE V—LAUCHLIN CURRIE'S ESTIMATES OF INCOME PRODUCING EXPENDITURES THAT OFFSET SAVING, 1929 AND 1937[a]

(In millions of current dollars)

Type of Expenditure	1929	1937	Change, 1929–37
1. Plant	4,365	2,175	−2,190
2. Equipment	5,680	5,341	− 349
3. Private housing	2,810	1,450	−1,360
4. Change in inventories	2,146	3,072	926
5. Foreign balance	447	−24	− 471
6. Change in consumer credit	987	891	− 96
7. Non-profit construction	568	190	− 378
Total business and private construction	17,003	13,095	−3,908
Total business and private construction excluding inventories	14,857	10,023	−4,834
8. Government: federal	−235	1,092	1,327
9. Government: state and local	928	−291	−1,219
Total: all governments	693	801	108

[a] Figures for items 4, 5, 6 are taken from Dr. Currie's revised estimates, Hearings, Pt. 9, *Savings and Investment*, p. 4122. His earlier unrevised figures are taken from various tables, *ibid.*, pp. 4011–14, in order to make use of a more detailed breakdown there available.

It is clear that the great changes in the volume of investment occurred outside of the governmental sphere. The increase in the net contribution of the federal government was virtually offset by the decline in the net contribution of state and local governments. Within the private sphere the gross decline came to nearly 4 billion dollars and the decline is even more striking if we exclude from our calculations the investment represented by the accumulation of inventories which was very large in both years but nearly a billion dollars larger in 1937 than in 1929. The decline in private investment excluding inventories amounted to 4.8 billion dollars. The bulk of this decline is easily traced. If we add together the declines in the items that represent construction of one sort or another, that is, plant, private housing and nonprofit construction, the sum is 3.9 billion dollars, which is some 81 per cent

[39] I use here the latest figures of Kuznets, *National Income and Its Composition 1919-1938*, chap. 4.

of the total decline. The volume of construction of both plants and residences was only half as large in 1937 as it was in 1929. The decline in equipment expenditures was small by comparison, less than one half a billion dollars and not nearly so generally dispersed throughout the economy. If allowance were made for price changes, the volume of equipment expenditures may actually have been higher in 1937 than in 1929.

Professor Hansen's and Dr. Currie's presentations of these materials constitute a valuable contribution to our knowledge of recent business history. Specialists, no doubt, will dispute points of detail. The major lesson of the figures certainly will stand. There was a great decline in investment. The decline centered in construction of industrial plant and private housing. Serious controversy begins with attempts at interpretation.

To the present writer three lines of explanation suggest themselves. The first would stress the importance of particular circumstances peculiar to various segments of the field and to the period in question. Thus, one may point out that building construction follows long cycles which vary in duration from fifteen to twenty years. Residential construction which reached a peak in 1925 would, then, not be expected, in the ordinary course, to see another year of high boom before, say, 1940 or perhaps later. Industrial construction which turned down later than residential building would be expected to reach its next high point at a still later date. Moreover, the growth of the power of labor unions and of trade associations which took place after 1933 may well have placed special obstacles in the way of investment in a field notoriously ridden by monopoly in the supply of labor and materials. Investment in railroad plant and equipment was hindered by unwieldy financial structures and bankruptcies which were the heritage of the great depression.[40] The decline in the favorable net foreign balance (nearly half a billion dollars) was due in some part to the recency of our unfortunate experience with foreign lending in the twenties and in some part to the "peculiar" difficulties in international affairs which marked the thirties. This same period saw a decline in the influence of Big Business upon government and a concomitant growth in the influence of farmers and labor unions. It is plausible that the rapidly accelerated pace of governmental intervention in business, the strengthened hand of labor unions, and the novelty of government spending badly shook the confidence of investors. If investment decisions are concentrated in the hands of a particularly small group of men apt to move in the same social circles

[40] Compare Professor Hansen's remarks in this connection, Hearings, Pt. 9, *Savings and Investment*, p. 3547.

and to reinforce each other's prejudices, such an outcome is the less surprising.[41]

A second line of explanation stresses the importance of cyclical factors. The decline of business from 1929 to 1932 was the most serious in our recorded industrial history. From such a deep depression, it is not possible to recover with more than a certain rapidity. Except for temporary inventory booms, time is required for the circular flow of money to be rebuilt, for investment expenditures to have their effect upon consumption, and so to encourage further investment for replacement and expansion. As our economy now operates, the process of expansion creates difficulties by its own working which make the occurrence of a halt very probable after a time. Part of the increased investment which takes place during the expansion represents an accumulation of postponed replacement expenditures. When these have been made, the rate of investment must tend to fall off. Moreover, an important part of the increase in investment associated with expansions is made up of accumulations of inventories required to support a larger volume of production and trade. This rate of investment in inventories depends in part upon the rate of growth of production. If the rate of increase of production slows up, as it generally does in the course of business expansion, this will tend to cause the rate of investment in inventories to fall.

Thus, there was no reason to expect the recovery from the Great Depression to be complete. As a matter of fact the upswing from 1932 to 1937 was the longest expansion recorded in this country since the Civil War, and it was characterized by a far more rapid rate of expansion of national income than took place in any of the business expansions since at least the World War. Net national income rose at the rate of 5.04 billion dollars a year during the expansion 1932-37. The highest annual rate observed in any earlier expansion since 1919 was 3.75 billion dollars in the period 1927-29. In the light of these considerations, one may easily think the last expansion less notable for its failure to reach the national income of 1929 as for the fact that it lasted so long, proceeded so vigorously, and was so nearly complete as it turned out to be.

These lines of explanation, however, are rejected out of hand by Professor Hansen. He proposes a third line of explanation:

> We are completing this year a decade of unemployment on a scale never before known in our history. This decade of unemployment was interrupted by a partial recovery which culminated in 1937. This depression is of a magnitude and duration which has eclipsed all others, not excepting even

[41] See Dr. Altman's estimates of the number of people concerned with major investment decisions: *Saving, Investment, and National Income,* monog. no. 37, p. 89.

the deep and prolonged depressions of the seventies and nineties. It is a unique phenomenon. It cannot be explained in terms of ordinary business-cycle analysis. For the time being at least we are experiencing a chronic maladjustment, a failure of adequate outlets for capital expenditures for a society geared to a high savings, high investment level. We are caught in the midst of powerful forces in the evolution of our economy which we but dimly understand. Something has gone wrong with the forces making for expansion. We are undergoing a fundamental change in the structure of our economic life.[42]

Given this conviction, it is natural to stress the importance of broad changes in the character of investment opportunities, to seek causes whose roots are more deep-seated and permanent than those included in the lines of explanation suggested above. Our recent unfavorable record is, in this view, not merely the result of a deep depression made more serious by its conjunction with other special events. It is a symptom of changes and adverse circumstances likely to fashion our economic history for a long time to come. From the standpoint of people less impressed with these circumstances, it is plausible to emphasize the rapidity and duration of our recent recovery and to blame its incompleteness on cyclical factors and special circumstances. From Professor Hansen's point of view it is natural to explain the duration and rapidity of the expansion by the fact that we had suffered a deep depression and to consider the incompleteness of the recovery as a symptom of more profound causes.

The large capital outlays on industrial plant and equipment in 1936-37 may appear surprising if one accepts my thesis with respect to declining population growth and the lack of important new industries. One must remember, however, that we had passed through a long period of deep depression, so that there had accumulated a considerable volume of depreciation, depletion, and obsolesence, together with the new capital requirements which the rising national income stimulated, but new developments were not available on a sufficiently large scale to sustain for long the high capital outlays of 1936-37, or to push them to sufficiently high levels in view of the lag, particularly of residential building."[43]

Professor Hansen's views about the change in our economic circumstances, the effects of which he believes we are now feeling and are likely to continue to feel during many yars to come, are not unfamiliar. The nineteenth century, he would urge, was preëminently the time when the shop gave way to the factory, hand labor to machinery, and steam power to electrical power. It was also a time of immense improvement

[42] Hearings, Pt. 9, *Savings and Investment*, p. 3503.

[43] From Professor Hansen's testimony, *ibid.*, p. 3515.

in means of transportation and communication which involved enormous investments in their own development and which also made possible the migration of large populations and the exploitation of new resources in the most distant parts of the world. All this technical change and exploitation of newly discovered resources manifestly provided great and growing opportunities for investment.

Concomitant with all this growth of wealth went an accelerating rate of increase in population. As an explanation of the abundance of investment opportunities during the last century, the growth of population is apparently of even greater importance in Professor Hansen's view than were the other characteristics of the period. To this rapid growth of population Professor Hansen attributed the optimistic and venturesome spirit of the capitalists of the time. Overinvestment had to be short-lived in a situation which would soon demand ever greater outfits of plant.

The situation today is far different. The rate of increase of population during the last decade was barely half that which marked the one before it. Our most reliable population estimators assure us that it will be still smaller in the future. The deterioration of international economic life makes large migrations of people and capital unlikely in at least the near future. No technical developments whose investment potentialities are as great as those which marked the development of the automobile or of the railroads are in sight to replace these matured techniques.

There seems to be no way at present to choose among the three competing lines of analysis on grounds which would be compelling to an investigator. Indeed, since the various lines of explanation are not mutually exclusive, the job which is really in question is that of assessing their relative importance—in many ways an even harder task. The present writer is certain that Professor Hansen would admit this; indeed, at many scattered points in his testimony he urges the importance of factors which properly have their place in lines of interpretation rival to his own. If his testimony seems one-sided in these respects it is important to remember that it is natural and right to stress the parts of one's story which are novel and unfamiliar to one's hearers.

Professor Hansen's thesis is more a challenge to work than to controversy. It is clear that much needs to be done analytically to clarify the rôle of population growth. How is it supposed to act? To what extent does it influence the demand for investment goods? To what extent are labor costs affected? In what manner does it modify the demand for consumption goods, if at all? How much of its influence is exercised *via* numbers? How much *via* age composition and family composition? Is it a force independent of a growth of national income

from other sources or does it have an expansive effect only when income is growing?

III. The Operation of the Capital Markets

The conditions which affect the use that can be made of funds comprise only part of the determinants of the rate of investment. The organization and operation of the capital markets and the attitudes of the people who trade in them are equally important. The investigations of the T.N.E.C. emphasize two impressive characteristics of the modern American loan market: the massive rôle played by the great savings institutions and the importance of internal financing of business corporations.

1. *The Principal Savings Institutions*

Donald H. Davenport[44] gave evidence on the growth and concentration of the volume of assets held by life insurance companies, savings banks and other institutions for the accumulation and management of private funds. The figures in Table VI abstracted from his materials present the situation as it stood in 1938.

TABLE VI—ASSETS OF PRINCIPAL SAVINGS INSTITUTIONS, JUNE 30, 1938
(In billions of dollars)

Life insurance assets less policy loans	28.8
Time deposits of commercial banks	14.4
Mutual saving bank assets	11.6
Building and loan association assets	5.7
Total assets of private savings institutions	60.5
Governmental pensions and trust funds	6.2
Postal savings deposits	1.3
U. S. savings bonds	1.2
Total public savings funds	8.7

By tabulating the rate of growth of the assets of these institutions Dr. Altman was able to indicate that a major portion of individual savings now finds its way into the life insurance companies and banks listed in Table VI above.[45] Dr. Davenport presented evidence concerning the degrees of concentration of assets in the hands of these institutions. He found that at the end of 1937 over 50 per cent of the assets of life insurance companies were under the control of the five largest organiza-

[44] *Ibid.*, pp. 3726-74.

[45] *Saving, Investment, and National Income,* monog. no. 37, p. 32.

tions and over 80 per cent under the control of the sixteen largest. Similarly, the 25 largest mutual savings banks held over 40 per cent of savings bank assets at the end of 1938. The 8 largest commercial banks controlled over 20 per cent of the assets held by this class of institution at the end of 1938.

Dr. Davenport was impressed, too, with the extent to which the assets of these institutions were concentrated geographically. This seems clearest and most significant in the case of the life insurance companies which gather their funds from all parts of the country but are located principally in New York and other northeastern states. At the end of 1937 he found that over 75 per cent of life insurance assets were held in New York, Philadelphia and New England.

These compilations of the volume of assets held by savings institutions give particular point to the elaborate investigations conducted by the T.N.E.C. into the operations of the life insurance companies, the largest by far of the group.[46] A great part of the results is no doubt relevant to the investment policies of mutual savings institutions and commercial banks. A convenient summary of the most significant portions of this testimony, so far as it affects the operation of the capital markets, is presented in Dr. Altman's monograph.

An examination of the portfolios of life insurance companies and the testimony of company officials revealed a not unexpected concentration of investments in the securities of relatively old companies whose affairs are more easily investigated and whose safety is least open to dispute. The emphasis upon safety of principal is of course reinforced by legal requirements imposed upon the investment policies of insurance companies. The emphasis upon the securities of our larger and older companies may be a consequence in part of the managerial interrelations between insurance companies, commercial banks and the largest industrial corporations.

Particular companies appear to concentrate their assets in particular forms of investments or in particular sections of the country to the exclusion of other forms and other regions. Thus, one company handles no rural mortgages. Another has a great part of its mortgage portfolio invested in New York City mortgages alone. The explanation is not far to seek. To handle a given class of investments efficiently requires the establishment of an elaborate staff of officials. Specialization upon particular types of investment in particular localities helps to reduce the cost of management. But these facts serve to cast doubt upon the extent to which the concentration of assets in large savings institutions

[46] Pts. 4, 10, 10A, 12, 13, and 28 of the Hearings are concerned with various aspects of the life insurance business.

secures an efficient distribution of loanable funds to the borrowers best able to use them. There can be no question that such specialization must serve to reduce the degree of competition among insurance companies for investments.

Competition for investments is affected, too, by the concentration of assets in the hands of a few large companies. Dr. Altman pointed out that the cash holdings of the 26 largest legal reserve life insurance companies increased by more than 500 million dollars from 1929 to 1938 and that all the executives who were questioned agreed that their cash holdings were greatly in excess of the amount normally required in the business. They claimed that inability to find investment outlets enforced this inconvenient liquidity.

Dr. Altman remarks cryptically: "It would be to the advantage of any one company to invest its surplus cash; and if other companies followed suit, the competition would undoubtedly have a marked effect upon both long- and short-term interest rates."[47]

The significance of this possible absence of competitive fervor is far wider than is suggested by the size of the surplus cash holdings of the insurance companies. Nearly 19 per cent of their total assets were invested in United States government bonds at the end of 1938. If insurance companies hesitated to dispose of their cash for fear of reducing the yield on interest bearing assets, how much more would they fear to disturb the prices of government bonds by selling them and of corporate bonds by buying them?

There can, of course, be little doubt that the large insurance companies are so large that their investment policies are affected to some degree by fears of spoiling the market. But their accumulations of cash in recent years hardly clinch the point. In a period of extraordinarily low interest rates, it is hardly surprising to find large investors holding a great deal of cash and, indeed, of loans of near-by maturity against the chance that interest rates may rise in the near future.

The general significance of these aspects of insurance company operation, moreover, remains questionable in view of the quantities of assets held outside life insurance companies and, indeed, outside all of the principal savings institutions. Dr. Davenport referred to the estimate of the Securities and Exchange Commission that individual and corporate trustees held assets of about 50 billion dollars at the end of 1938. In that year, too, the still expansible assets of commercial banks (less an amount required to cover deposits in savings departments) came to 42.4 billions and an unknown but undoubtedly immense volume of assets was directly controlled by individuals.

[47] *Saving, Investment, and National Income,* monog. no. 37, p. 44.

2. *Internal Financing of Business Enterprises*

The extent to which business depends upon the capital markets for its financing is generally overemphasized. Dr. Altman[48] presents estimates which compare the gross savings of business enterprise with George Terborgh's estimates of outlays for plant and equipment. The figures presented make it clear that during the period covered, 1923-39, by far the major part of plan and equipment expenditures were financed by the internal funds of business.

Dr. Altman also presents Arthur Hersey's figures on the sources and uses of funds for 58 large industrial companies which cover roughly one-fifth of all manufacturing and mining. During 1930-39 these companies required the use of 5.5 billion dollars almost entirely for investment in plant and equipment. Only 10 per cent of these funds were secured from sources outside of the companies themselves. Gross savings provided 83 per cent of the required amount and the conversion of assets supplied the remainder.

Dr. Altman poses a dilemma. It seems clear that the larger and the better established firms in the United States have little need to borrow funds in the open market. But it is these firms which have the easiest and cheapest access to the capital markets as these are now organized. It is not clear that, as the capital market now functions, the job of putting savings of individuals into the hands of willing borrowers is efficiently performed.

IV. The Remedies Proposed

None of the witnesses or monographists undertook to set out a systematic statement of the policies which they considered to be most effective in filling the gap between the quantities which they believed people would wish to save and invest at high levels of income. Professor Hansen and Dr. Altman, who came closest to doing so, were both more concerned to state the nature of the problem to be met than to prescribe a detailed course of action. Thus, we are told at many points that if private investment, in the ordinary course, is not sufficient to offset savings at high levels of income our policies must be directed to increasing private consumption, stimulating private investment, augmenting private consumption by communal consumption, and private investment by public investment.

The statements of these writers about specific policies indicate a tolerance for most, if not all, of the chief devices for securing these objectives which have been proposed in recent years.

[48] *Ibid.*, p. 57.

Both Professor Hansen and Dr. Altman agree that our system of taxation requires overhauling primarily to reduce the burden which our levies now place on consumption. They would reduce excise and pay roll taxes and raise the required sums by increased taxation of the middle income groups.[49]

Professor Hansen argues that private investment can and should be stimulated by measures designed to remove those aspects of the corporate tax structure which have repressive effects upon expansion;[50] by securing "stable and responsible labor relations";[51] and by requiring "adjustment of prices to the lower costs springing from technical improvements in order to tap potential demand and thus secure larger output, and thereby also larger capital plant and equipment expansion."[52]

Dr. Altman and Professor Hansen both point to certain obstacles in the way of increased building construction: unduly high interest rates, monopoly prices for labor and materials, inadequate supervision of construction, cumbersome foreclosure and tax sale procedure.[53]

Dr. Altman emphasizes the lack of a capital market adequately organized to supply the needs of small and medium sized business.[54] In this connection Adolph A. Berle's suggestion that a new set of commercial banks be created specifically to furnish longer term credit than our present commercial banks habitually do is of interest.[55]

Finally, public spending to augment private consumption and investment is strongly urged by these witnesses.

Among these many proposals for reform and action, heaviest emphasis was placed upon two lines of action: first, a reconstitution of the tax system to reduce the communal propensity to save; and, second, public spending to augment the volume of investment. The discussion of the second of these proposals need not detain us long. In the T.N.E.C. testimony the efficacy of public spending is taken for granted, its limitations neglected. Certainly nothing was presented which advanced the argument so heatedly pursued in the last decade. The policy of tax reform, however, deserves a longer glance because its potentialities can be somewhat illuminated by the use of the T.N.E.C. materials.

[49] Hearings, Pt. 9, *Savings and Investment*, p. 3556.

[50] *Ibid.*, p. 3544.

[51] *Ibid.*, p. 3556.

[52] *Loc. cit.*

[53] *Saving, Investment and National Income*, monog. no. 37, p. 101.

[54] *Ibid.*, p. 102.

[55] Hearings, Pt. 9, *Savings and Investment*, pp. 2809 *ff*.

1. *Potentialities for Increasing Consumption by Tax Reform*

The estimates of tax burdens and savings by income groups presented by Dr. Colm and Miss Tarasov[56] make possible some preliminary guesses about the effect of a redistribution of tax burdens upon individual savings. The Colm-Tarasov figures are, admittedly, extremely rough estimates of the distribution of income, savings and tax burdens. The authors are careful to emphasize their dependence upon inadequate samples, extrapolation in time and indirect evidence. Estimates of the effect of a redistribution of tax burdens upon savings will, of course, inherit all the errors of the basic data and add some of their own. It seems wise, nevertheless, to attempt to secure some notion in quantitative terms of the probable consequences of a program of tax reform.

Rough calculations by the present writer indicate that a truly enormous shift of taxes from the relatively poor to the relatively rich would be required to effect a substantial reduction of savings. In the fiscal year 1939, the year to which the Colm-Tarasov figures refer, the present writer estimates that a 30 per cent reduction of the amounts people desired to save (aggregate income being constant) would have involved the extinction of all taxes on the incomes of families earning less than $2,000 a year and the distribution of this burden among higher income groups.[57] The groups so relieved of taxation contributed in 1939 no less than 45 per cent of total tax revenues. Moreover, since the taxes on the lower income groups are levied mainly by states and local govern-

[56] *Who Pays the Taxes?* monog. no. 3.

[57] The calculations upon which these results are based involved the following major steps: (References are to Colm-Tarasov, *op. cit.*)

1. The tax burden borne by families earning less than $2,000 in 1939 was distributed among the better-paid groups. This was done in two ways: first, in proportion to the total income earned by these groups, and, second, in proportion to the taxes actually paid by these groups. The first assumption places a heavier relative tax burden on the middle income groups than they now bear. The second assumption maintains the degree of progression which now prevails for groups earning over $2,000.
2. Total income *per capita* after taxes was then calculated for each income group before and after redistribution of the tax burden. For this purpose, estimates of the number of families in each bracket found in Table C, p. 42, were utilized.
3. The amounts actually saved by each income group were found in Table 1, p. 6, and the percentage which savings were of income after actual taxes calculated for each group.
4. The rate of increase in percentage of income after taxes which was saved for each dollar of increase of per capita income was then found by dividing the differences in percentage of income saved by successive income groups by the differences between income brackets in income per capita after taxes.
5. These figures were then used to calculate the change in percentage of income saved due to the changes in income associated with each assumed redistribution of the tax burden.
6. Finally, the percentages gained (from 5) were applied to the total income after taxes in each income bracket after redistribution of the tax burden.

The amount actually saved in 1938-39 as estimated by Colm was 7.97 billion dollars. The two methods of redistributing the tax burden used above indicated reductions of savings of 26 per cent and 31 per cent respectively.

ments, what is involved is nothing less than the stupendous task of local rather than of national fiscal reform.[58]

A redistribution of the tax burden, moreover, meets more than administrative difficulties. Its objective for our present problem is a reduction of the realized income of the rich, a transfer of the proceeds to the poor. By their very nature, however, progressive income taxes operate as an attack not only on high *realized* incomes but also as an attack on the *prospective increases* in income which people hope to secure by investment. Thus, while a more progressive system of taxation should operate to increase the rate of spending, it should also operate to decrease the rate of investment. These difficulties, administrative and theoretical, make the possibilities of securing a substantial net increase of national income by tax reform appear more modest than they are usually assumed to be.

Tax reform, however, is not the only way to secure an increase in our average propensity to consume. The elimination of monopoly controls and restrictions, by reducing profits, operates in the same direction. Moreover, this process, while it tends to reduce profits and therefore savings, also acts to increase investment. As such, it is a useful supplement both to a program of tax reform and to a program of public investment.

This double-barreled influence of an increase of competition deserves more stress than it appears to have been given in the materials reviewed. The pages which follow are, therefore, offered as a statement of the connection between competition and the propensities to save and invest. This statement is in no sense an attack upon those who contributed to the valuable work of the T.N.E.C. Its purpose is simply to add a useful rider to their efforts.

2. *The Monetary Consequences of Competition*

First to be discussed is the effect of monopoly restrictions upon the rate of investment. The consequences which may be expected from

[58] A simple increase of income taxation would, of course, eat still further into savings, provided the burdens fell largely on the relatively rich and the benefits accrued largely to the relatively poor. In a note entitled "The Incidence of an Income Tax on Saving" (*Quart. Jour. of Econ.*, Feb., 1942, pp. 337 *ff.*), Professor Abram Bergson presents estimates of the effect upon saving of an increase in income taxation amounting to 5 per cent of incomes received in the fiscal year 1936. Proceeding by methods somewhat similar to those described above, Professor Bergson finds that an additional tax of this magnitude would have reduced savings by 30.1 per cent if levied in such fashion that the then existing degree of tax progression was maintained. Had the tax been levied so as to maximize the reduction of savings, the decline in savings would have been 32.3 per cent. Professor Bergson is careful to point out, however, that these figures overstate the magnitude of results to be expected. No allowance is made for the effect upon incomes of the expenditures of the additional revenues or for any possible decline in investment consequent upon an increase in income taxation.

the establishment of a more intense degree of competition may conveniently be discussed under two heads: first, the initial consequences which are involved in the process of establishing freer competitive conditions; and second, the longer run aspects of the comparative attractiveness of investment in relatively monopolistic and relatively competitive markets.

If competition can be made more free, the rate of investment is likely to increase initially for three reasons.

One aspect of the improved situation will be a reduction in the obstacles facing firms which wish to share in the opportunities afforded by hitherto profitable industries. We should, therefore, expect investments to be made by newly organized firms previously excluded from tempting markets.

A second consequence of more intense competition is an increase of aggregate output. This is the result of two factors associated with competition: lower prices and increased cost of output. Lower prices have an obvious and direct effect upon amounts purchased. An increased cost of output operates indirectly. It constitutes a shift of income from profit makers to their hired factors of production and should act to raise the ratio of national income spent.

Now it seems reasonable to assume that the production of a greater volume of goods will necessitate the use of a greater volume of fixed equipment. There would seem to be but one important qualification to be borne in mind. To the extent that commodities were previously produced by firms operating at other than the optimum scale of output, competition which involves an approach to the optimum scale of output per firm will act to reduce the amount of resources required to produce a given output. And this factor will tend to offset the effects of the increased production of goods.

The process of establishing freer competitive conditions will make its influence felt on the rate of investment in still a third way. More intense competition will serve to reduce the prices not only of consumers' goods but also of producers' durable goods. Any decrease in the price of producers' durable goods should lead business men to increase their total real investment in these goods.

So far we have been discussing the initial effects upon investment of an increase in competition. The effects in the long run turn on a somewhat different set of considerations. As a continuing matter, investments may be said to be occasioned in seven principal ways:

1. New resources are found or made accessible and are drawn into production when the necessary funds are laid out.

2. Improved techniques of production are found and more efficient

equipment invented, the exploitation of which involves an investment of capital.

3. New products are devised and offered for sale; and this usually, though not always, involves an investment of funds.

4. Relative prices of equipment and labor and of equipment of different sorts change and thus new methods of production become profitable.

5. Demand shifts from one sort of commodity to another and this may sometimes involve investment at a rate greater than the depreciation of equipment in the lines adversely affected by the shift in demand.

6. The exploitation of new resources and of cost reducing improvements, by lowering costs of production, acts to increase the total real income of the economy and this, in turn, creates opportunities for investment.

7. Finally, in industries in which the obstacles to investment are not too great, constant attempts to establish a profitable niche for themselves are made by eager investors.[59]

We turn now to consider how freer competitive conditions will influence the rate of investment in connection with each of the opportunities for investment mentioned above. It is clear to begin with that profitable opportunities to bring new resources into use are far greater in situations in which the obstacles to securing a market are minimal than in conditions where these are great. In the perfect market of theory where obstacles to entry are completely absent, it will pay new firms to exploit newly discovered or more accessible resources whenever the average total costs of production, using the new resources, fall below the average total costs of production for firms operating under the previously existing conditions. By contrast, firms already operating find it profitable to exploit new resources only when their use drives average total costs of production below prime costs in the previously existing situation. Any expense involved in establishing a market for a potential producer with new resources serves to increase the degree to which the new resources must make possible a reduction in costs before their exploitation is profitable.

Exactly the same comments apply to the question of the introduction

[59] Some substantial portion of our annual rate of net investment must be accounted for by these last mentioned attempts, successful and unsuccessful, to secure a business market. Of course, to the extent that these attempts constitute a net inflow of resources into an industry, we have already taken them into account in the section dealing with the initial effects of establishing more competitive conditions. There is an additional point here, however. An investment of $1,000 that forces the abandonment of an investment worth an equal amount increases the demand for investment goods by $1,000; it decreases the demand only by the annual rate of depreciation on investments of the character in question.

of newly devised and more efficient machinery or techniques of production. So far, then, as the discovery of new resources or techniques is independent of the degree of competition, it is clear that in relatively competitive conditions there is a greater incentive to exploit these emerging opportunities than exists in relatively monopolistic markets.

The availability of these opportunities, however, is probably not independent of the degree of competition. In the first place, it would appear that the search for new resources and new techniques would be fostered by the existence of open markets in which their products could be sold. As a protective measure, firms threatened by the possibility of such discoveries would try to make them themselves.

On the other side, it may be urged that large firms will be better able to accept the risks attendant upon research and exploration than will small ones. It is not clear, however, that in all cases, or even in most cases, an increase of competition would involve a decrease in the size of firms. But even if it be admitted that a split-up of large firms would reduce the amount of funds which the successor organizations would devote to research, the very same conditions are likely to see the organization of enterprises specializing in the work of exploration, scientific and geographical. Moreover, a well-conceived governmental policy looking to the disestablishment of monopoly might well carry, as one of its corollary features, an increase in the amount of government funds devoted to the pursuit of industrial research.

Similar considerations are involved in the case of investments designed to bring new products to the consuming public. In this case, a new producer will find it profitable to offer an improved product whenever he considers that its sale will cover its average costs of production, including such promotional costs as are necessarily involved. Any obstacles which existing firms can put in his way serve to discourage the investment. So far as existing producers are concerned, the obstacle to offering new products consists, in some part, in the fact that the new products will serve to take demand from their older commodities. A more important obstacle, however, is the fear that an improved item may not meet success because competitors will be induced to offer similar products. The strength of such obstacles varies directly with the size of firms relative to the size of the market area in which they operate and with the effectiveness of agencies for promoting exploitative coöperation among producers.

It is clear that the incentive to invest in order to promote new products is weakened by the existence of monopolistic arrangements. But qualifications should be attached to this statement similar to those made in the case of investment to exploit new resources or techniques. While

the incentive to promote new products is greater in competitive markets, it is not certain that the funds devoted to their discovery and perfection will be so great.

We must next consider the effects of changes of relative prices. Such developments make the immediate introduction of modified methods of production profitable for new firms. For established firms this is true only if total costs using the new methods are lower than prime costs with the old. It is certain, therefore, that investment will respond to changes in relative prices more continuously and completely in industries into which entry is easy than in those into which entry is difficult.

The fifth and sixth occasions for investment, increases of aggregate demand and shifts in the direction of demand, may be conveniently considered together. In neither case is the result clear. The response of investment either to an increase of demand in industry as a whole or in particular industries would seem to depend on two considerations: (1) the effect of an increase in demand upon output in an industry organized in monopolistic fashion as compared with the effect of the same increase in a competitive industry; (2) the relative effect upon investment of a given increase in output in the two situations.

While it may be argued with a high degree of plausibility that output in a competitive industry would be greater than in a monopolistic industry, it is not clear that an increase of demand would result in a greater increase of output under competition than under monopolistic conditions. Nor is it quite clear that a monopolistic industry would make a greater or smaller investment in response to a given increment of output than would a competitive industry. The character of the conditions of supply of equipment and of other factors of production to the industry will determine the issue. This section of the argument, therefore, reaches inconclusive results.

Seventh and finally, it is clear that a general reduction of obstacles to the entrance of new firms into industry will increase the demand for investment goods from that routine category of enterprisers who are constantly seeking by repetitive methods to secure an established place in industry.

The weight of the argument thus far has been strongly in favor of the notion that the destruction of monopoly controls will make for a higher rate of new investment, both immediately and in the long run. It may be thought, however, that an important qualifying circumstance has been overlooked, namely, the relative degrees of risk associated with monopoly and competition respectively. Will not business men feel that an increase of competition increases the risks of enterprise; and will they not, in consequence, be less eager to commit their funds?

This may, in fact, be the case; but it is a qualification which attaches to our argument concerning the immediate rather than the continuing effects of an increase of competition.

It was argued above that, if the many real obstacles to investment associated with monopolistic controls were reduced and if the prices of producers' and consumers' goods fell, this would lead to an immediate increase of the rate of investment. It would do so directly because new firms would seek to share in the profits of existing industries and because the prices of producers' goods had fallen. It would do so indirectly because the volume of consumers' goods demanded would have risen in consequence of lower prices and lower profits.

If, however, an attack on monopoly controls enormously increases business men's fear of potential competition, this argument is certainly weakened. Investors previously balked in their desire to join an industry will be less eager to commit their funds when the obstacles in the way of other potential investors are reduced. In extreme instances, it may be supposed that, instead of new firms joining an industry, old ones would withdraw. This seems implausible, but the theoretical possibility cannot be denied. To the extent that it operates, however, the indirect stimulus to investment is also somewhat weakened. The increase of demand which we suggest would flow from the reduction of profits will not be so great. All this, however, does not touch the other sources of immediate encouragement to investment: lower prices for producers' equipment and for consumers' goods in general.

More important is the fact that the degree of fear of potential competition is not a factor relevant to our argument concerning the long-run incentives to new investment. For this purpose we must compare industries which—aside from the emergence of additional opportunities to invest—are in equilibrium, that is, both the relatively monopolistic and relatively competitive groups which we compare are adjusted to the degree of potential competition associated with their respective markets. The question at issue is: Which group (potential competitors included) will respond in greater degree to its emerging opportunities to invest? The argument above indicated that a greater response is to be expected in situations in which potential competitors face fewer obstacles in securing a market or access to materials and equipment.

So much for the relation between monopoly and the rate of investment. Next to be considered is the connection between monopoly and the propensity to save. It has been pointed out that the volume of realized profits is perhaps the most important single cause of inequality in the distribution of income and, therefore, of our propensity to save. An effective attack upon the propensity to save involves an attack upon

high realized profits. The difficulty is to attack the realized profits of existing investments without attacking the prospective profits of new investments. Progressive income taxation falls foul of this hazard; it hits the one, but it fails to miss the other.

As a supplement to, and perhaps in part as substitute for, a program of progressive taxation, consider the claims of an attack on monopoly. It is clear that the destruction of monopoly positions will involve a lowering of the rate of realized profits. It will do so, first, by encouraging the organization of competing firms to share in a given volume of business. This will mean either an increase of average costs of production or else a wider distribution of the same volume of profits. It will act in the same fashion, secondly, by promoting lower prices or higher wages or the expenditure of funds to promote sales.

A lower rate of profits in turn means a tendency to lower *aggregate* profits if the assets carried by industry for a given rate of output are no larger under competitive than under monopolistic conditions. This seems to turn on two conflicting forces. In the first place, monopolistic firms may carry larger or smaller assets than competitive firms producing the same volume of goods. The outcome turns on the conditions of supply of factors which will be different to monopolistic and competitive firms respectively. While total costs for firms of the same size are likely to be lower if the firms are monopolies, there is no general reason to suppose that the economies will be gained in the use of capital assets. So far as this factor goes, then, the outcome is inconclusive. But, secondly, since firms in industries marked by price competition are likely to be operating more nearly at optimum scale than are firms in monopolistic markets, the assets held by an industry for a given scale of output are likely to be smaller in competitive situations. So far, then, as this qualitative argument can take us, we are led to the conclusion that competitive industries are likely to hold a smaller quantity of assets and to earn a lower rate of profit on them. Aggregate profits earned in connection with a given rate of output should, therefore, be smaller under the competitive conditions.

While this merely indicates the direction in which an increase of competition would operate, no one can read the many volumes of T.N.E.C. monographs and Hearings dealing with monopolistic restraints upon business without being impressed by the ramifications of monopolistic controls and the probable extent of monopoly profits.

An increase of competition, then, like an increase of taxation, is an attack upon inequality in the distribution of income. As indicated above, however, it operates by increasing the inducement to invest rather than by reducing it. The profits realized by monopoly act to

increase the rate of saving. The profits made in a competitive industry, it is true, also act to increase the rate of saving, but they constitute an open invitation to investment. To put the matter categorically, a regime of monopoly means high profits which tend to be hoarded; a regime of competition means lower profits which tend to be employed.

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PRESENT POSITION AND PROSPECTS OF ANTITRUST POLICY

By MYRON W. WATKINS

I—Antitrust at Crossroads

It is a commonplace now that the Sherman act was a product of its time. More than a commonplace, an adage, is *O tempora, O mores.* Admittedly the times have changed. Methods of production have been revolutionized by the advent of electric power, automatic machinery, and industrial chemistry. Methods of distribution have been wrought into a new pattern by the development of advertising, automotive transportation, the radio, consumer finance. The accepted ways of life are not what they used to be. But it does not follow, as some would have it, that therefore the antitrust law of 1890 which still defines the basic policy of American government in the regulation of trade and industry is outmoded, in line for displacement. It may be. Equally, it may not be.

Whether antitrust policy has become an anachronism, however well or ill adapted it may have been to the exigencies of the times which gave it birth, depends, first, upon what one understands to be the essence of that policy as now interpreted and applied, and, secondly, upon what one conceives to be the significance of the changed conditions which now confront us. At what does the Sherman act really aim? What does its enforcement or attempted enforcement actually accomplish? What do the changes in the contemporary economic environment, industrial processes, and commercial practices connote or portend? What do they require by way of apt rules for industrial governance? Preliminary to essaying an answer to these questions, it might be well to inquire briefly concerning the circumstances which have occasioned them.

Undoubtedly a large factor in calling antitrust policy into question was the bitter experience of the long depression in the early thirties. It was not only that revulsion developed toward an economic policy which could not prevent such unprecedented losses and such intolerable misery. There was also the sense of frustration in having available abundant resources, unmatched equipment, and millions of men eager to work—yet idle, withal, for want of an opportunity. A (legally) free market instead of providing an outlet for ingenuity, industry, and enterprise seemed to be a device especially designed for thwarting

native impulses toward economic provisionment. Few there were to protest, therefore, and a multitude to support, the New Deal experiment of shelving a free market, suspending the antitrust laws, and attempting to run industry by a combination of generous subsidies to the "under-privileged" and free-handed sanctions to the "specially-privileged." The results of a policy of self-regulation of industry by majority rule, as exemplified in the N.R.A. codes and their administration, were not as salutary as the sponsors of the movement had hoped. They were still less heartening to the general public. Though the collapse of the N.R.A. left few mourners, there was observable no spontaneous reaffirmation of faith in the efficacy of competitive forces working through free markets to regulate and direct the economy in the interests of the common welfare. Antitrust policy was reinvoked, not because it promised stability and "plenty," but because it was the only alternative ready to hand.

This was shown, in one way, by the institution of a comprehensive Investigation of Concentration of Economic Power by the 75th Congress. The Temporary National Economic Committee was created in hearty response to a Presidential Message of April 29, 1938, which set forth lucidly the grounds for continued exploration in quest of a public economic policy which would afford greater assurance of full utilization of resources without sacrifice of freedom. The extensive Hearings conducted by the T.N.E.C. and the forty-five monographs prepared at its instance are the subject of review in this volume. But at this particular point it is not so much the significance of the data assembled and of the studies made, or of any single aspect of them, to which attention is directed as it is the fact of the survey being undertaken, zealously prosecuted by able men from numerous branches of the public service, and followed with keen interest for three years by the general public. Not since the stormy days of the United States Industrial Commission at the turn of the century has there been evident a popular concern so deep, so wide, and so eager over the issues of public economic policy, over the question: Industrially whither? Manifestly, Antitrust is at the crossroads.

Misgivings growing out of domestic experience have been quickened by the trend of events abroad. The rise of fascist statecraft and the rebirth of economic autarchy have circumscribed the area of free market adjustments and generated cumulative difficulties for prudent investment and provident management by free enterprise in the areas where it is still permitted to function. Indeed, these developments have raised profound doubts that the luxury of freedom can indefinitely be afforded in a world economy ruled so largely by political forces for political ends. These doubts are not allayed by the actual

spectacle of a ruthless regimentation of the economic resources of whole nations, and now of whole continents, for purposes of nationalistic aggrandizement.

The war which was thus bred could not be isolated. As it spread over three-quarters of the globe it steadily became more apparent that more and more warlike preparations for defense from the encroaching menace were required. The national defense program inaugurated in May 1940, and the lease-lend program adopted a year later were the outward expressions of a growing conviction that war, like peace, is indivisible. When, finally, on December 7, 1941, Pearl Harbor was blasted by a treacherous "friend," there was none to gainsay that all-out action on this conviction could longer be deferred. But no more for preparations for war than for the conduct of war itself are free enterprise, free markets, and free competition adapted. These are devices by which the resources of a community may be directed toward ends which reflect the voluntary choices of the individuals composing the community. They tend to supply what men want. But men do not "want" war. If the community is to be prepared for war, still more if it is to win a war, it must put aside the ways of peace and become a warrior: it must give up the vocations it prefers and the goods it wants and concentrate its resources and its energies upon making the implements of warfare. There is no other way to accomplish this effectively, as we learned from experience a quarter-century ago and as current exigencies are teaching us again, than by drafting a common program and taking concerted measures, if need be coercive measures, to secure its fulfillment on schedule.

It is not that the common welfare needs to be invoked only in time of war and may safely be disregarded in time of peace. The common welfare is always paramount. But in a period of emergency what constitutes the common welfare is something very different from what it is in ordinary times. "Plenty" and security are not the same thing. Furthermore, the means to the attainment of these ends differ. For the government not only to sanction free enterprise generally and to make public enterprise an exception, but also to safeguard freedom of access to markets and to enforce competition may be wholly consistent with the promotion of the common welfare in terms of "plenty" and nothing less than a disastrous blunder in other circumstances, when survival is at stake.

This is not to say that antitrust policy, the enforcement of the antitrust laws, can serve no useful purpose in periods like the present. There is still need for vigilant extirpation of privately contrived barriers to enterprise, restrictions on production, and price manipulation. In not all segments of the economy have the exigencies of defense, or will the

exigencies of war, require or lead to a complete supersession of the market. Moreover, the mere fact that the government finds it necessary here, there, or elsewhere, itself to erect barriers to entrance to or exit from a trade, to impose restrictions on production, to establish priorities in distribution, or to fix minimum or maximum prices, provides no license for private interests to fill in the gaps in these regulations by arbitrary or collusive measures of their own. Indeed, one may be justified in concluding from some of the revelations of the Special (Senate) Committee investigating the National Defense Program, not to mention World War experiences, that in these very circumstances there is a special need of vigorous enforcement of the antitrust laws. The opportunities for favoritism, discrimination, predation, and extortion are always at the peak when an economy is operating in high gear, whether or not the acceleration of business activity is induced by war orders. And beyond the jeopardy to consumer interests by direct manipulation of markets thereby facilitated, there is the by no means fanciful possibility of the improvised agencies of administration being imposed upon, having their functions perverted, by combinations of special interests which are still bent upon "business as usual," still nourishing the convenient illusion that the public interest and their interests are always and everywhere identical.

Nevertheless, the obvious and admitted inadequacy of antitrust policy to assure that the resources of the community will be expeditiously and efficiently mobilized for defense and for war has had its share in impairing public confidence in the soundness of that policy. For the deficiencies in our preparedness for war, even after two years of unmistakable warning, were clearly not confined to those of a directly military character. Notwithstanding that its adaptability has been conceived to be one of the primary sources of strength in a free enterprise economy, there was plainly something—stemming perhaps from recent trends in the structural features of the national economy, perhaps from unwonted and obscure forces shaping the operative policies of business, perhaps from emergent tendencies affecting the fundamental human relationships in industry—which resisted and retarded the process of economic adaptation to war. The emergency has only served, thus, to strengthen the conviction that a reëxamination of the very bases of public economic policy is in order.

II—Nature, Objectives and Implications of Antitrust Policy

Antitrust policy rests upon certain assumptions. Just because these assumptions are so often left implicit in its formulation or defense, they warrant summary restatement. It is assumed that men are economic

prime-movers, not passive slaves of circumstance. It is taken for granted that individuals know their own interests and are vigilant in defending them, resourceful in pursuing them. They are not supposed to resign themselves readily to accepting what comes; rather they have the initiative to go in search of what they lack and to persist in the quest, only spurred by each lack overcome. In sum, the human animal is conceived to be dominated by irrepressible inner drives. This may not be the polar opposite of the conception of human nature with which the behaviorists have familiarized us, but it has many elements difficult to reconcile with that view.

It is assumed, in the second place, that the economic environment is characterized by an abundance of opportunities.[1] Nature has not been too niggardly in supplying the raw materials of existence. Natural resources are available to be turned into the means of livelihood by an industrious populace, endowed with a workmanlike bent. In a measure, this condition has doubtless always obtained, but it certainly obtained in a higher degree, considered relatively to the size of the population, in America in the nineteenth century while there was yet a frontier of virgin forests, untracked prairies and untapped mines than it does today.

In respect to technology, the situation presupposed for the effective operation of competitive markets of the type (characterized by a multiplicity of independent enterprises forthrightly contending for patronage) which antitrust policy is designed to implement and promote is one in which knowledge of the accredited ways and means of production is accessible to all, or at any rate to a great many. Not only that, but the capacity for acquiring and applying that knowledge is assumed to be well within the reach of the vast majority. This means that the technical processes prevalent in industry must be comparatively simple and readily comprehensible. The technical equipment required for these processes operating on an economical scale is assumed to be no more extensive than numerous individuals or voluntary groups can command. Handicraft and husbandry come close to fulfilling the technological conditions for a workable antitrust policy of the nature of that with which we are familiar. In the past half century, however, the situation in this respect has departed somewhat markedly from that on which the established antitrust policy is premised. The advances made by modern technology since 1890 have in many fields raised an all

[1] Of course, this does not imply that the society must be "poor," much less that it must be "rich." It has no reference at all to the volume of accumulated wealth. What it does refer to is potential wealth, and this in the form of readily accessible resources, nature's "bounty." The condition might be described otherwise, and perhaps not less significantly, as one of a high degree of expansibility.

but impenetrable barrier to independent enterprise. Only a comparatively few can be expected to master the technical problems or even to acquire an understanding of the esoteric technical jargon of those who do devise the complicated formulae and processes of industries such as rayon, electrical apparatus, or air-conditioning, for example. Quite aside from patent privileges and capital requirements, in a wide range of manufacturing industries technological conditions have severely limited the opportunity to engage in production, however beguiling the profit prospects may be.

On the legal side, antitrust policy has never been self-sufficient. It has always assumed the maintenance by government of the sanctions of property rights, contract rights, and various civil rights. Without these sanctions, without the readiness of public authority to vindicate these private rights whenever they might be invaded or infringed, there could be no competition to be regulated; for there would be no market in which products are voluntarily exchanged. It is manifest that the antitrust laws are no more than a supplement to the law of property, of contracts, of torts, and even of crimes. The type of economy, or of economic behavior, which the antitrust laws posit and seek to cultivate is only a reflection of the type of society which the entire legal system, including the Constitution, is designed to foster and conserve.

The fabric of social-economic institutions in which antitrust policy is rooted is not easy to describe. For one thing, it does not stay put. It changes continually. Yet its changes are not always perceptible. Its nebulous content does not facilitate comprehension of the inwrought design, let alone of the shifting pattern. Settled usages, traditional habits of thought, accredited canons of behavior, sanctioned goals of endeavor—these are the stuff of which the institutional fabric is made up. These are what compose "the American way of life." Just because they envelop and mold our every act, our most transitory thought, they evade analysis. They are taken for granted. In ordinary circumstances, we are too familiar with them, and too unfamiliar with their potential alternatives, consciously to reflect on their distinctive features or to probe their essential meaning. Yet in times of crisis, no less of society than of the individual, self-examination is invited, if it is not indeed imperative.

The institutional scheme of which antitrust policy forms an integral part is one which, may we say, honors the individual. It does not glorify the state. It treats the state as an instrument. It respects the common man's addiction to the pursuit of self-appointed ends. It erects no ***summum bonum*** other than the sum of the individual "goods" which emerge from the self-directed efforts of a free community. Divergences among these self-directed efforts and differences in these self-appointed

ends are not only tolerated; they are welcomed. The basic framework of government is designed, indeed, far more to safeguard rights than to impose duties. Common sense and common decency, backed by the common will, are trusted to secure, to a workable degree, voluntary accommodation and the mutual, pacific adjustment of conflicting interests. In this fashion the strength and resourcefulness of the individual is cultivated. In this fashion, the capacity of the organized community for survival is fostered by a spontaneous process of continuous adaptation to the ever-changing conditions of livelihood.

All this may be as repellent, to some, as brackish water from a stagnant pool. But it may also have the flavor of well-aged wine. The taste depends upon the palate. That a society so constituted has, or may have, certain elements of rugged strength, a capacity not only for survival but for growth, and a capacity for growth not alone in numbers and in wealth, but as well in cultural amenities and intellectual horizons is attested by the history of the past century. For that matter, it is attested by the record of the past five centuries, to go back no farther. But the question remains: Does it still have, does it have today, in this century, the same survival value it has had in times past? Or has the range of free opportunity become so constricted with the preëmption, exploitation, and exhaustion of natural resources, and with the displacement of a technological use and wont, which were a common heritage by a technology that lent itself to usurpation as a special privilege, that the appeal of self-responsibility and the prospect of self-advancement have lost their hold upon the common man? Can the modern economy much longer be effectively organized in terms of private rights instead of in terms of public duties?

This much may be confidently said: In approaching an answer to these questions account must be taken of the emergence of a deep-seated conflict in the institutional patterns on which contemporary society is organized. On the one hand, business arrangements are made, trade conducted and employment secured within the framework of this traditional "system" of free private enterprise in free markets. The procedure is by way of transactions. The units of economic organization and industrial action are individuals and voluntary associations (corporations, trade unions, coöperatives). The apparatus of industrial government consists largely of three elements: self-control and the mutual checks of competition, supplemented and reinforced by a variety of legal inhibitions, of which the antitrust laws are a conspicuous example. On the other hand, there has grown up within, perhaps one should rather say behind, these forms of business organization an industrial system patterned on the machine technique. The essence of that "system," as of any machine, is deliberate differentiation of func-

tion and artful integration. In so far as any process is conducted on the model of the machine technique, procedure by way of transactions is anomalous. The parts are interdependent. They must be fitted together and operated as a unit. Were needle and bobbin subject to independent controls, the sewing machine would ill serve its purpose. The "free play of competitive forces" among the parts of a machine spells friction, inefficiency, breakdowns.

The intention need hardly be disavowed of arguing that American society *should* be made over on the mechanical model.[2] The point is simply that, in industry, it has for at least a half-century been undergoing transformation in that direction. And the habits of thought and ways of behavior thus engendered cannot be confined to the seven-hour day on the assembly line. *Pari passu* with the advances of the machine technique in industry has come a progressive standardization of ways of life, an increasing social and economic integration, which, whether we like it or not, unquestionably tends to check, or restrain, enterprise. For these developments at once restrict the range of opportunity for individual initiative and weaken the impulse thereto. They tend to devitalize competitive forces and deprive a free market of its *raison d'être*.

All this is not to say that the technological forces making for standardization and integration may not be counteracted. Much less is it to subscribe to the *non sequitur* that whatever is, is right. There was, fortunately, in the proceedings of the T.N.E.C. no disposition evinced to accept the naïve assumptions that, in shaping an economic order, there are any "inevitables" stemming from technology and that a meliorative trend is foreordained by an inscrutable providence. But if a free society is to endure and an economic organization compatible with it to be rebuilt, there is advantage in recognizing the sources and the strength of the antithetical tendencies which pose the problem and which have to be dealt with. To release the vital impulses of a generation which has become habituated to mechanical routine, more will be required than a reaffirmation of old formulae and a revival of familiar expedients.

[2] Perhaps a caveat might not be out of place here, also, against interpreting the foregoing observations as an explanation, much less as a defense, of industrial concentration in terms of technological expediency. The discussion has to do with the significance of the machine technique as a social institution, *i.e.*, as a pattern of human behavior. It is not concerned with the advantages, real or putative, of mechanization of industrial processes and their bearing, actual or alleged, on the growth of Big Business. For those who may be interested, the writer's view on this latter issue has been fully expounded in his book on *Industrial Combinations and Public Policy* (Boston, 1927), chap. 4; in his article on "Large Scale Production," in the *Encyclopedia of the Social Sciences*, Vol. IX, pp. 170-81; and more recently in a memorandum for T.N.E.C., published in *Relative Efficiency of Large, Medium-Sized, and Small Business*, monog. no. 13, as Appendix A.

III—The Scope of Antitrust Policy

In a reëxamination of antitrust policy it is well to recognize, as it was generally recognized in the Hearings and the monographs of the T.N.E.C., that the policy was not designed and does not operate as the exclusive, exhaustive embodiment of public economic policy. It is only one segment of the pattern of industrial government, even though the scope of its application may be broader and its influence on the general welfare, the fruitfulness of economic endeavor, more decisive than those of any other single segment. There are important sectors of economic activity to which it does not apply at all, as in the field of government services. In this sphere, competition may be authoritatively excluded, as in the case of police, postal, and sewage-disposal services. Or, though competition may be tolerated, as it is, for example, in the provision of meteorological information, recreational parks or education facilities, it is not invited, encouraged or vigorously protected.

Somewhat analogous to this situation is that in the broad area of self-directed economic provisionment, including such relatively unbusinesslike occupations as farming, and numerous handicraft trades, for example, painting and sewing. Here, too, competition is tolerated. But it is so far from being relied upon as a regulator of economic behavior that it is not only not encouraged; it is actively discouraged. By A.A.A. programs, soil conservation programs, coöperative marketing programs, and other measures, the government has undertaken to organize collective action and correspondingly to repress competitive effort in agriculture.[3] Similarly, in relation to handicraft trades, indeed in relation to labor employment generally, a governmental policy has developed of protecting, not competition, but voluntary concerted action. This is the essence of the National Labor Relations act, for example. In these spheres, it is true that while there may be formal statutory repudiation of the applicability of the antitrust laws (as by Section 6 of the Clayton act), some vestige of jurisdiction may still be retained thereunder by the courts. Even among farmers and carpenters, collective action that goes beyond mutual self-help and becomes predatory interference with others may be a restraint of trade. But where draw the line? In practice, even this negative element of antitrust jurisdiction is rapidly becoming a shadow without substance.[4] This is not offered as a criticism of the public policy in question. It represents merely a statement of fact.

[3] *Cf.*, Paul T. Homan, "Notes on Anti-Trust Policy," *Quart. Jour. Econ.*, Vol. 54 (1939), p. 73.

[4] See, *e.g.*, *Apex Hosiery Co.* v. *Leader*, 310 U.S. 469 (1940); *United States* v. *Hutcheson*, 312 U. S. 219 (1941); and *United States* v. *Brotherhood of Teamsters*, U.S. Supreme Court, October Term 1941, No. 131 and No. 132, decided March 2, 1942.

There is another large sector of economic behavior and relationships in which antitrust policy may be, one might say, theoretically applicable but in which it is not actually relied upon for the protection of public interests. This is the broad field of public utility services embracing such diverse industries as the railroads, with their enormous fixed capital investments, and radio stations, with little more capital requirements than that represented by a franchise to broadcast on "the air." In these branches of industry, whatever their distinctive economic characteristics may be—and this is a question which deserves more probing than it received either in the T.N.E.C. Hearings (9 out of 37 "parts") or in the supplementary monographs (2 out of 45 "studies") devoted to public utilities—competition is not sought or depended upon, in the main, to control prices, investment, output. A generalization of this kind is not very trustworthy, however. Whereas in the case of the railroads, rates may be rigorously regulated and yet competitive investment sanctioned and competition in service actively promoted and zealously protected, in the case of gas works or telephone systems, competitive investment and service may be forbidden, while in the case of banks, rates and services may not be regulated at all, or at least other than indirectly, though investment is meticulously controlled.[5] The incidence of these several variants of public economic policy in the public utility field, not simply upon the public utilities themselves and their immediate customers, but more especially upon the administration of the antitrust laws and their efficacy as instruments for the governance of trade and industry, deserves far more searching inquiry than it has received from the T.N.E.C. or its experts.

It is true that two special segments of such an inquiry as is here suggested were investigated by the T.N.E.C. These were the incidence of the investment policies and practices of insurance companies and of banking houses upon the capital market and indirectly, thus, upon the opportunities for free enterprise.[6] But even these investigations

[5] There are qualifications. Conciseness and accuracy make opposing demands. Traditionally, bank rates have been subject to usury laws, a nominal limitation. Recently rates *payable* on demand deposits have been subjected to regulation. ***Minimum*** (capital) investment is prescribed in some jurisdictions; and the effect of charter requirements may be to control in a measure the aggregate volume of investment in commercial banking. But the investment control to which reference is made in the text is primarily that of the *directions* of investment of bank funds, *i.e.*, the purposes for which, or the borrowers to which, loans may be made.

[6] See, in particular, Hearings, Pts. 10, 10A and 12, *Life Insurance;* and Pts. 22, 23 and 24, *Investment Banking*. The provocative *Study of Legal Reserve Life Insurance Companies* by Gerhard A. Gesell, T.N.E.C. monog. no. 28 [Washington, Supt. Docs., 1940], also considers this problem, but only incidentally. The primary emphasis is upon the issue of the consequences, for insurance safety and insurance cost, of the conditions and policies found.

were little more than exploratory. No intensive analysis was made of the potential hindrances and actual obstacles to the maintenance of effective competition in industry from the displacement (partly authoritative and partly contrived) and the perversion (wholly contrived) of competition in these two "businesses affected with a public interest." Beyond this, the T.N.E.C. did little more than scan the issues presented, for example, by the ownership or financial control of pipe lines (public utilities, at least nominally) by petroleum refiners;[7] and it left unprobed the challenging questions raised by the ownership of manufacturing concerns (*e.g.*, Western Electric) by public utilities (in this case, American Telephone and Telegraph), or by the joint ownership and/or control of manufacturing concerns and public utility enterprises, as in the case of the Pullman Company, or of the Aluminum Company of America. This is not to overlook, in the latter connection, the interesting and significant surveys of the wide-ranging interests of such fortune-building families as the Rockefellers, the du Ponts and the Mellons.[8] It is only to insist that the problem of coördinating variant policies of administrative regulation for public utilities with a policy of competitive-market regulation for numerous, diverse trades and industries—when the legal line of distinction seems to run tangentially or even haphazardly across any recognizable economic lines of distinction, and when financial integration recognizes no boundaries or distinctions whatever—is of an importance which has not yet been fully comprehended. It is hardly too much to say that the efficacy alike of administrative regulation of public utilities and of competitive-market regulation of most other lines of business hinges more immediately on the solution of this problem of reciprocal interference and mutual frustration than on almost any other single factor.

One other aspect of this somewhat neglected question of the interrelationship of public utility regulation and antitrust policy may be mentioned. That is the question of the treatment of patents. The position of patented inventions as a species of the genus public utility is not always, in fact is seldom, recognized. But a patent is a franchise,[9]

[7] The subject is discussed sporadically in the Hearings on the *Petroleum Industry*, Pts. 14, 14A and 15.

[8] See, especially, *The Distribution of Ownership in the 200 Largest Nonfinancial Corporations* by R. W. Goldsmith and others, monog. no. 29; and *Survey of Shareholdings in 1,710 Corporations with Securities Listed on a National Securities Exchange* by H. Granby and others, monog. no. 30. Several other monographs touch upon this matter, incidentally, also, *e.g.*, monog. no. 11 on *Bureaucracy and Trusteeship in Large Corporations;* and monog. no. 21 on *Competition and Monopoly in American Industry,* the first, in the course of a stimulating analytical study, the second, in a convenient compendium taxonomically embroidered.

[9] If legal authority be asked for a proposition which is so obvious in logic, it may be found in the following cases in which the Supreme Court has explicitly termed patent

and the possession of a franchise is the mark of a public utility.[10] Public utility regulation is intimately linked with, if it is not, indeed, derived from, the state's franchise-dispensing power. The essence of a franchise is not the privilege accorded to engage in a certain business. It is the restriction, expressed or implied, upon the freedom of others to enter the licensed field, in a word, to compete with the holder of the franchise, at will, and upon such terms as to these others may seem fitting. This is the gist of a patent. It takes out of the public domain a trade, a process, or a product which is, or otherwise would be, open to the public generally,[11] and gives exclusive rights therein to the inventor—actually, today, in practical effect, to his corporate employer. This is distinctly a special privilege.

The curious thing is that the grant of this particular type of franchise has not hitherto been attended with subjection to public regulation, as has the grant of other species of public utility franchises. Though a patent is in its very nature a *special* privilege, created and conferred by the government as a means of advancing what is deemed to be a *public* interest, and is thus logically indistinguishable from a franchise, for example, to broadcast on a specified wave length, for some incomprehensible reason it has continued to be treated, both by Congress and the courts, like property unaffected with a public interest. Whereas the manner of exercise of all other species of property affected with a public interest has long been recognized not only to be properly a matter of public concern but to require, on account of a peculiar susceptibility to abuse, special regulation, latterly reinforced by administrative supervision, the manner of exercise of patent franchises has continued to be regarded as nobody's business—except that of the patentee. And this policy has persisted notwithstanding the fact that the susceptibility to abuse arises in the one case as in the other from the same root cause, the monopolistic privileges conferred by the franchise. The obligation *to serve* the public, the obligation to render that

grants "franchises": *Bloomer* v. *McQuewan,* 14 Howard 539 (1852); *Chaffee* v. *Boston Belting Co.,* 22 Howard 223 (1859); *Seymour* v. *Osborne,* 11 Wall 516 (1870); *Mitchell* v. *Hawley,* 16 Wall 548 (1872).

[10] It is true that not every public utility enterprise may hold, as most of them do, a specific grant of public authority to engage in a given business within a given area upon given terms to the exclusion of certain others (not necessarily all others). There may still be some ferries, for example, which operate without benefit of a formal license or "certificate of public convenience and necessity." Such enterprises might be said to possess a "license by sufferance"; or perhaps the lawyers might find something akin to a common law franchise. In any event, such cases surely belong in what might be termed a marginal limbo.

[11] As stated by the Supreme Court in *United States* v. *Bell Telephone Company,* 128 U.S. 315,370 (1888), "The United States by issuing the patents which are here sought to be annulled has taken from the public rights of immense value and bestowed them upon the patentee . . . as an inclusive right."

service *without discrimination*, and the obligation to limit the charges for that service to *a fair return*, these elementary duties of a public franchise-holder which constitute in law and in reason the indispensable *quid pro quo* for the monopoly conferred by public authority, have all been ignored in the development, one might almost say the lack of development, of a public policy on the exercise of patent privileges.[12]

The consequences of this glaring anomaly, considered from the standpoint of its relation to the efficacy of antitrust policy, are only of late coming to be perceived. The T.N.E.C. has made an outstanding contribution to a better understanding of the deficiencies of public economic policy in the sphere of market regulation by focusing attention upon the pervasive and pernicious influence of the unregulated abuse of patent "rights" in undermining competitive conditions in industry. The facts brought out in the Hearings, Parts 2 and 5, regarding the influence of patent practices on the structure and functioning of the glass industry and the beryllium industry, and a few inadvertent disclosures in Part 3 of the Hearings regarding the restrictive operation of patent cross-licensing arrangements in the communications field, awakened a wide popular interest.[13] The conditions portrayed were so evidently a reflection of a prevalent conception in certain quarters of the business world that patent privileges in effect exempt patentees from the antitrust laws that the Department of Justice was moved shortly thereafter to institute a broad investigation of abuses of patent rights amenable to disciplinary action even without amendment of either the patent laws or the antitrust laws.[14] In the two years since that investigation was started a score of cases involving monopolistic restraints through the use of patents have been instituted, not counting all the separate actions, civil and criminal, founded on the same set of facts.[15]

[12] Compare: *Cotton Tie Co.* v. *Simmons*, 106 U.S. 89 (1882); *Second Paper Bag Case*, 210 U.S. 405 (1908); *Leeds and Catlin* v. *Victor*, 213 U.S. 325 (1909); and *General Picture Co.* v. *Western Electric Co.*, 304 U.S. 175 (1938), affirmed after reargument, 305 U.S. 124 (1938). These are only illustrative cases, exemplifying the worst aspects of our so-called "patent law."

[13] Hearings, Pt. 2, *Patents*, pp. 377-667; Hearings, Pt. 3, *Patents*, pp. 959-69 and 1001; Hearings, Pt. 5, *Monopolistic Practices in Industries, Development of the Beryllium Industry*, pp. 2011-2163. The facts presented in the Hearings on patents were developed through investigations conducted by the Department of Justice, under the direction of Mr. Joseph Borkin and Mr. Hugh Cox, who were commended by the committee for the excellent preparation and effective presentation of the material. Hearings, Pt. 5, *Monopolistic Practices in Industries, Development of the Beryllium Industry*, p. 2163.

[14] See Department of Justice, Press Release, "Investigation of Misuse of Patent Privileges," December 11, 1939.

[15] See U. S. Department of Justice, "*The Federal Antitrust Laws*, with Summary of Cases Instituted by the United States," Cumulative Supplements, March 15, 1941, August 1, 1941, and subsequent releases.

But while the T.N.E.C. Hearings provided some startling revelations on specific abuses of patent franchises, it remained for Professor Walton H. Hamilton in T.N.E.C. monograph no. 31, on *Patents and Free Enterprise*, to trace the sources and probe the implications of "the patent system" as it currently operates. The extent to which and the manner in which it has been perverted from a device for the promotion of advances in the industrial arts to a buttress of the vested interests of vast corporate estates is portrayed with extraordinary insight. Confusion, cross-purposes, and mutual frustration between antitrust and patent law are shown to have suffered the erection of utterly needless obstacles to free enterprise and effective competition which even a better implemented and more zealously prosecuted antitrust policy could scarcely have circumvented. Yet those two elements of public economic policy which have actually been permitted to develop antithetic tendencies clearly might have been so shaped that they would supplement and reinforce one another.

"A situation has blundered into being which calls for drastic amendment. A grant of privilege is conferred upon the inventor in order that the industrial arts may go forward. . . . The . . . 'exclusive right' of the inventor is a right—like all rights, subject to the general law—from which all other persons are excluded. The owners of patents attempt instead to make 'exclusive' mean absolute. . . . Repeatedly it has been argued that 'the patentee is Czar within his domain'; that 'he is under no obligation to deal fairly or obey the law' [quoted from brief for appellee, *Interstate Circuit* v. *U. S.*, 306 U. S. 208 (1939)]. . . . The grant of a patent is intended to protect an invention; in practice it repeatedly operates to block off a whole technology. . . . Thus it has come about that a patent is harnessed to causes it was never meant to serve. It may be used as a shield against public policy, as an immunity to the general law. . . . The net result is a strange anomaly within a democracy. An industry is removed from the control of the market and no substitute is provided for [the?] protection which has been forfeited. There emerges an industrial province completely independent of the authority of the Government. . . . If presently the patent is not brought into accord, free enterprise can survive only on the fringes of a closed economy."[16] The picture thus sketched is no surrealist distortion.

IV—Antitrust Procedure

Though the common law had long recognized a public interest in the processes of market adjustment, it had provided for that interest

[16] *Patents and Free Enterprise*, monog. no. 31, pp. 159-63.

no active, impartial champion.[17] Injuries sustained by private parties from certain types of restraints of trade might be redressed in civil actions for damages, and a restraint might so taint a transaction or relationship as to leave the parties thereto without a remedy for defection or for malfeasance *inter se se*. Perhaps the most distinctive features of the Sherman act of 1890 were the prohibition of privately contrived restraints of trade and the assumption by government of an obligation to discover, prosecute, and punish those who might presume thus to erect barriers to free opportunity in the market.

The policing of trade by public authority with the object of suppressing restraints was a new governmental function. Nevertheless, this novel responsibility was deemed sufficiently comparable to the traditional obligation of government to prosecute crimes against the common weal and to vindicate private rights which might be invaded that the use of the familiar, accredited techniques for law enforcement seemed warranted. Hence the technical devices provided for the implementation of antitrust policy were those suggested by experience. The prosecuting task was assigned to the Department of Justice with authority to proceed either by way of indictment or in equity; and the courts were authorized to entertain suits by those who might be "injured . . . in their business" by illegal restraints and, upon proper showing, to assess treble damages on the offending party. No special investigative body was set up, and no special investigative powers were conferred. No provision was made for official supervision of business practices and trade relationships, with or without regular reporting of their operations by those to whom the law applied. No standards were established for the privilege of engaging in interstate commerce in the corporate form of organization, or for the conduct of business in that sphere, apart from the injunction not to monopolize.

The reasons for the absence of legislative inventiveness, for the adoption of backward-looking procedural devices, are not far to seek. The policy the procedural devices were designed to enforce was itself backward-looking. It looked to the restoration of a pattern of industrial control which was visibly being wrenched, skewed, warped. The situation seemed to be getting out of hand, which is to say the competitive market was not functioning to provide adequate checks and balances among the various private interests which were supposed there, through enterprise, rivalry and bargaining, to reach equitable adjustment, economic equilibrium. The aim was to restore the full vigor of competition.

[17] See, on the deficiencies of the common law in this respect, the author's *Industrial Combinations and Public Policy* (Boston, 1927); *Trade Associations: Their Economic Significance and Legal Status* (New York, 1925); and his article on "The Economic Implications of Unfair Competition," *Iowa Law Review*, Vol. 21 (1936), p. 263.

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The hope was that this might be accomplished simply by a minatory measure. In the middle of the most expansive era of American industry to have suggested that "trusts" and "malefactors of great wealth" were anything but adventitious excrescences on a sound body economic, might be symptoms of something more deep-seated, something in the nature of an arrested development of the forms of public control, would have been blasphemy. The theory of Antitrust was that if monopoly were roundly condemned, the occasional intervention of a vigilant public prosecutor backed by the might of majesty would be sufficient to discourage predatory aggression. The flow of investment funds, the output of goods, the movement of prices would proceed thus, unimpeded, in their accustomed channels and at their "natural" levels.

This defective implementation of antitrust policy from its inception has undoubtedly been a large factor in limiting its practical effectiveness. True, in the course of half a century there have been a number of developments, adaptations, and changes in the enforcement machinery originally provided. And in one instance, the establishment of the Federal Trade Commission in 1914, that machinery has been supplemented. Nevertheless, as Professor Hamilton makes clear in his excellent review of these developments in *Antitrust in Action* (monograph no. 16), the general pattern of enforcement procedure has remained essentially unaltered. It was not until 1903 that a separate division was created in the Department of Justice, especially charged with the enforcement of the antitrust laws. While this expedient has unquestionably greatly enhanced the efficiency and continuity of enforcement, it has not exempted the enforcement agency (1) from the binding influence of traditional conceptions and techniques so congenial to the legal fraternity, or (2) from the warping influence of political considerations flowing through a cabinet officer, subject, like his subordinates, to administrative pressure by the terms of this appointment. The establishment of the independent Bureau of Corporations in the same year and of its successor, the Federal Trade Commission, in 1914 provided additional facilities of investigation, and in the latter instance introduced an administrative procedure for the first time into competitive market regulation. But the narrowly circumscribed scope (unfair trade practices) of the administrative powers with reference to the general ambit of antitrust policy and the failure to integrate these auxiliary agencies of enforcement with the work of the Antitrust Division have limited severely the effectiveness of these gestures toward procedural supplementation.

The chief reliance, in fact, in the discharge of the primally important investigative function is still the cumbrous grand jury proceeding where-

in the Division becomes armed with the subpoena power. Thus equipped, and having enlisted the aid of a separate Justice bureau, the Federal Bureau of Investigation, whose operatives are primarily sleuths, trained in the technique and imbued with the traditions of the man hunt, the Division sallies forth to get its man—though the suspect is nowadays commonly a corporation, and the evidence sought relates not to low criminal hangouts and associations, but to business agreements and transactions of which a record or a clue may have been left in office files.

As Professor Hamilton emphasizes, the resort to criminal procedure puts enforcement upon a plane of combat in which the winning of a point through legal technicalities tends to overshadow the end of securing readjustments in business structure and policies which will effectuate the policy of the law. The real issues are prone to be confused and obscured. The negotiation of consent decrees has developed as one expedient for circumventing this handicap. It requires extreme caution and vigilance for effective use, but growing familiarity with the technique suggests that, in default of a more regularized and above-board procedure in which jurisdiction is formally acknowledged and assurance is provided that all cards are placed on the table, it may become a fairly dependable instrument of regulation. But it will always remain a makeshift, bearing the marks of its origin in improvisation.

Of the two civil remedies now open to the government, one, that by way of an action *in rem* for forfeiture of goods in transit, provides so light a penalty and affords such a limited opportunity for effective preparation of the government's "case," that it has seldom been invoked.[18] The other, that by way of a suit in equity for an injunction, is of far more practical value than the first but is subject to serious limitations also. Two of these only will be noted here. First, it affords no means whereby the Department can secure evidence on an other than voluntary or "negotiated" basis. Secondly, the penalties it provides have little deterrent effect since they do not directly penalize officers and directors and since they amount to no more than a requirement of abandonment of objectionable practices or, in the case of dissolution, restoration of the *status quo ante*—usually in part only!

By way of supplement to the existing procedural devices available for antitrust enforcement, it has been proposed that additional civil remedies be accorded the government. These might or might not be of similar character and scope to those now provided by Section 7 of the

[18] Seizure of goods in transit presupposes a clear violation of the statutes by the offending shipper. Where the violation can be readily established, as by a simple examination of the goods (*cf.*, Food, Drugs and Cosmetics act offenses), this may be an appropriate remedy. But it is quite ill-adapted to antitrust law enforcement, since the proof of an offense involves an arduous time-consuming task in assembling the necessary evidence.

Antitrust act in favor of private parties.[19] The T.N.E.C. recommended that they should not be so limited, but should afford a basis for recovery of "forfeits," independently of proof of "damages."[20] In the bill introduced by Senator O'Mahoney[21] in furtherance of this recommendation, it is provided that directors and officers of an offending corporation shall be liable to the government for twice the amount of compensation received by them from the corporation during the continuance of an illegal restraint or "attempt to monopolize." In addition, an offending corporation is itself made liable, in a civil suit, for twice the amount of net income earned by it during the period of antitrust law violation. These additional remedies, if granted, should go far to enhance the respect for the law among business men and increase the efficacy of enforcement.

No attempt will be made here to trace the varying fortunes of Antitrust through the permutations of political administration, through prosperity and depression, through hot and cold seasons of the climate of judicial opinion, through alternations in administrative preference for one or another of the available procedures, formal or informal, lionlike or lamblike. All this has been done so admirably in Professor Hamilton's

[19] Proceeding without supplementary legislation, the government, in its first and only attempt to secure relief via Section 7, was defeated. *U. S.* v. *Cooper Corp.*, 312 U. S. 600 (1941). But it may be doubted that even had it obtained a construction of Section 7, or should it obtain a statutory authorization, enabling it to sue for and recover damages, as private parties may now do when "injured" by a violation of the law, this would reinforce its procedural armory appreciably.

While it has been decided [*Connolly* v. *Union Pipe Co.*, 184 U. S. 540 (1902); *cf.*, *Wilder* v. *Corn Products Refining Co.*, 236 U. S. 165 (1912)] that it is not an adequate defense, in a suit for the recovery of the purchase price of goods delivered, to set up that the seller is engaged in an illegal restraint of trade or constitutes a monopoly, apparently it has never been decided that a buyer who pays the agreed purchase price to a seller monopolizing the article sold may not maintain an action for treble damages, under Section 7, on account of the "injury" sustained by him "in his business" by having had to pay an "excessive," or at any rate a noncompetitive, price. But since the great majority of the cases [see *Wheeler-Stenzel Co.* v. *Glass Jobbers Assn.*, 152 Fed. 864 (1907); *Van Camp* v. *American Can Co.*, 278 U. S. 245 (1929); *Story* v. *Paterson Paper Co.*, 282 U. S. 555 (1931), and cases there cited] in which private litigants have succeeded in recovering treble damages under Section 7 have involved either aggressive, predatory interference with, or discrimination against, the plaintiff's business by the defendant—and not simply a sale of merchandise to the plaintiff at a monopolistically elevated price—if the new civil remedy proposed were no more than an extension to the government of the right of action now accorded private persons by Section 7, it would probably avail the government little. For it may be presumed that few, if any, concerns engaged in violating the antitrust laws, whether by conspiracy or otherwise, are involved in a species of Guy Fawkes conspiracy to "put the government out of business," or hamper it in the conduct of public business.

[20] In a Preliminary Report to Congress, dated July 14, 1939. See *Final Report and Recommendations to the T.N.E.C.*, S. Doc. No. 35 (77th Cong., 1st sess.), p. 40.

[21] S. 2719 (76th Cong., 1st sess.), introduced June 29, 1939. In a statement by Senator O'Mahoney accompanying the submission of the bill, the coöperation of Assistant Attorney General Arnold in drafting it is acknowledged. *Congressional Record*, Vol. 84, p. 8192.

monograph that it would be superfluous again to go over the ground. It suffices to state that the conclusion he reaches that the institution of an administrative process, with the grant (evidently) of wide discretionary powers to the administrative agency, offers the most promising solution to the perplexing problem of enforcement of antitrust policy. The suggestion is frankly based on experience, chiefly in governmental regulation of public utilities.

Without attempting here an exhaustive analysis of the issues raised by this proposal, certain grounds for reservation of judgment on its efficacy and adequacy may be mentioned. (1) Experience in public utility regulation has not been unqualifiedly gratifying;[22] nor does the record of administrative regulation of trade practices by the Federal Trade Commission serve to generate much confidence in an expanded use of the device.[23] (2) There are some distinctive economic characteristics of public utilities, even though these have not always been clearly discerned, definitely formulated, and officially respected.[24] (3) Public utility regulation has been adopted in response to pressing exigencies in particular industrial situations and proceeds, in theory at least, in accordance with specified standards prescribed by the legislature. In contrast, under the instant proposal the administrative jurisdiction would be economy-wide and the range of administrative discretion in defining standards and determining what industries would be subject to one standard and what to another would apparently be unconfined. Not all the forebodings of bureaucracy are fanciful.[25] Finally, for present purposes, (4) the proposal leaves untouched the fundamental issues concerning the patterns and standards of enterprise organization, of the relationships of various interests in the corporate units in which eco-

[22] *Cf.*, Federal Communications Commission, ***Proposed Report on Telephone Investigation***, pursuant to Pub. Res. 8, 74th Cong. (Feb. 23, 1938); N.Y. Legislature, ***Report of the Joint Legislative Committee to Investigate Public Utilities***, Albany (Feb. 12, 1935).

[23] See Myron W. Watkins, ***Public Regulation of Competitive Practices*** (3rd ed.; New York, 1940); also, the writer's review of the Federal Trade Commission's ***Control of Unfair Competitive Practices through Trade Practice Conference Procedure***, monog. no. 34, in *Am. Econ. Rev.*, Vol. XXI (Dec., 1941), p. 845.

Significantly, Professor Hamilton makes no attempt to relate his proposed administrative agency to the F.T.C., or to base its promise on the latter's record.

[24] See, in this connection, Professor W. L. Crum's penetrating criticism of Mr. Gardiner Means's tendency to minimize the significance of these distinctions in his analyses of financial concentration: W. L. Crum, ***Corporate Size and Earning Power*** (Cambridge, 1939). For a brief summary of the economic characteristics of public utilities, see the writer's "Economic Prospects of Air Transport," ***Pub. Utility Fortnightly***, Vol. IV, No. 6 (Sept. 19, 1929), p. 332. A more extended essay on the same subject is ***Economic Basis of Public Interest***, by Rexford G. Tugwell (Menasha, 1922).

[25] See Robert Brady, ***The Rationalization Movement in German Industry*** (Berkeley, 1933); and the same author's ***The Spirit and Structure of German Fascism*** (New York, 1937).

nomic activities are actually carried on. It either ignores or, on occasion, accepts as inevitable the prevalent oligarchic organization of industry and attendant oligopolistic market conditions.[26] Can an antitrust policy worthy of the name thus make peace with "monopolistic competition"? Would a "negotiated peace" in this field have any better prospect of enduring than a settlement in that fashion of the parallel conflict between freedom and authority in the political sphere, now being waged on the battlefields?

V—An Attempt at Appraisal

Not all of the shortcomings of antitrust policy in respect to the preservation of vigorous competition and the effectuation of a democratic control of industry are traceable to defective implementation. True, the Antitrust Division has been severely hampered in the attempt to police the whole range of American industry on an annual budget which never exceeded $300,000 prior to 1936 and is even today less than 75 per cent of that of the Railroad Retirement Board! But inadequate appropria-

[26] That such a premise or implication is not logically unavoidable in the advocacy of an administrative set-up which would exercise regulatory powers industry-by-industry in accordance with its own discretion may be conceded. But it is none the less true that in practice the advocacy of such a policy and the acceptance of the conditions described go hand in hand. This was made clear in Professor Hamilton's case, for instance, on the occasion of one of his earliest public espousals of the program in question. See, Milton Handler (ed.), *The Federal Anti-Trust Laws: A Symposium* (Chicago, 1932), which started somewhat of a "feud" on this issue between Professor Hamilton and Professor Frank A. Fetter.

The issue came to the surface in the course of Professor Fetter's testimony on March 8, 1939, particularly in connection with his interrogation by Mr. Jerome Frank. (Hearings, Pt. 5, *Monopolistic Practices,* pp. 1951-82.) Mr. Frank took as the point of departure for his questioning, Exhibit no. 358 (*ibid.,* pp. 2192-2200) a statement prepared by the Federal Trade Commission with which the S.E.C. Commissioner seems to have disagreed sharply.

Mr. Frank's position may be indicated by a brief quotation (p. 1959): "It seems to me that what we need to do is to canvass the possibilities of working, in some industries, with a minimum of the drastic, iron-handed governmental imposition that the word 'regulation' connotes, and see whether we cannot work, *perhaps with some modicum of law*—with a greater quantity of legal apparatus in some industries and less in others—to get the desired end." (Italics supplied.)

Professor Fetter's position may likewise be indicated by a brief excerpt from his testimony (p. 1981), though in both cases a single extract from a long discussion does less than justice to the parties. Responding to a summary of Mr. Frank's suggestion by Mr. Berge, he stated: "If we go far with that thought we are going to have a bureaucratic examination and regulation of each separate industry, whereas I think the N.R.A. is an example of the fact that if there were any regulations of ethical practice that were valid for one industry they were probably valid for all. The notion that you would have a separate ethical code for each one of five or six hundred industries is an absurdity." (The "ethical" adjective might be dropped without misrepresenting Professor Fetter's thought, it is believed.)

This basic issue persists. The Hamilton-Frank thesis is sharply challenged, *e.g.,* in a recent article by Corwin Edwards, "Economic Implications of Business Boundary Laws," *Law and Contemporary Problems,* Vol. VIII, No. 2 (1941), p. 292.

tions and blunt procedural tools are not alone responsible for Antitrust's failure to forefend that concentration of economic power which called the T.N.E.C. into being.

Aside from its diminutive size and poor equipment measured against the mounting scale of the task confronting it, the Division has been charged with the enforcement of a policy which has not always been what it seemed. If the antitrust act was a product of its times, antitrust policy has equally been a product of changing conditions and changing conceptions of what the public interest required. These shifts in the concrete meaning of antitrust policy have in part proceeded from modifications of the outlook and aim of succeeding administrations, as noted above. Perhaps to an even greater extent, however, they reflect shifts in judicial opinion and in legislative policy.

To consider the former influence first, the course of adjudication has in some respects been not only singularly tortuous but markedly obstructive from the standpoint of effectuation of the policy of the law. One, but only one, of the impediments thus put in the way of effective antitrust enforcement is that emphasized by Professor Handler in his *Study of the Construction and Enforcement of the Federal Antitrust Laws* (monograph no. 38). It is the difficulty of extracting from the series of antitrust decisions, and still more from the succession of rationalizing opinions, any definite, dependable criteria of the essential elements of illegality. What part, if any, of the source of this difficulty resides in a judicial, and judicious, hesitancy to make definitive commitments, a timid inclination to hide behind the skirts of the rule of reason, and what part in a deliberate choice of the devious paths of expediency in preference to the straight and narrow road of principle is not clear.

Whatever the explanation, Professor Handler's study conclusively demonstrates that an effort to discover consistency and continuity in the antitrust decisions is foredoomed to futility. The difficulty is not only in reconciling the trend of judicial opinion in cases involving collusive action with that in cases concerning proprietary fusion or monopolistic practices independently framed and followed.[27] The logician must go to some pains to eliminate any trace of conflict between such confederative cases at those of the Window Glass Manufacturers,[28] and Appalachian Coals,[29] on the one hand, and of Trenton Potteries,[30]

[27] *Cf., e.g.*, as did Mr. Justice Brandeis, in dissent, the judgment in the *Harwood* case, 257 U.S. 377 (1921), with the decision in the *Steel* case, 251 U.S. 417 (1920). Or, again, compare the verdict in the *Gasoline Buying Pool* case, 310 U.S. 150 (1940), with the judgment in *General Talking Pictures Co.* v. *Western Electric Co.*, 304 U.S. 175, 305 U.S. 124 (1938).

[28] 263 U.S. 403 (1923).

[29] 288 U.S. 344 (1933).

[30] 273 U.S. 392 (1927).

Sugar Institute,[31] and the Gasoline Buying Pool,[32] on the other. On the status of mergers, it would tax the ingenuity of even the most gifted artist in legal legerdemain to bring into accord the series of decisions running from the Knight case through the Northern Securities, American Tobacco, Standard Oil, Shoe Machinery, and Steel cases to the recent Aluminum decision.[33] The tergiversations of judicial opinion in interpreting the law have surely been a considerable factor in limiting the achievements of Antitrust.

But this is not all. A far more formidable obstruction from this quarter to the effectuation of the policy of the law, if that be taken as the maintenance of genuinely competitive markets, has been the indifference displayed by the courts, in applying the standard established by Congress, to the significance of what may now be termed "conditions of monopolistic competition." Without benefit of economic training, unskilled in economic analysis, and disdaining economic advice,[34] the courts have developed, particularly in applying the rule of reason to mergers, a tolerance of oligopoly which is incompatible with the preservation of forthright competition in the market.[35] The simple fact is that where sellers are few neither collusion nor oppressive tactics are required to stifle competition. No legal casuistry can eliminate the pressure toward price stabilization resulting from canny attention to the marginal revenue curve. No glib phrase making "size . . . no offense" can dispel the telltale evidence of restraint in identical bids,[36] simul-

[31] 297 U.S. 553 (1936).

[32] 310 U.S. 150 (1940).

[33] *U.S.* v. *E. C. Knight Co.,* 156 U.S. 1 (1895).
Northern Securities Co. v. *U.S.,* 193 U.S. 197 (1904).
U.S. v. *American Tobacco Co.,* 221 U.S. 106 (1911).
Standard Oil Co. v. *U.S.* 221 U.S. 1 (1911).
U.S. v. *United Shoe Machinery Co.,* 247 U.S. 32 (1918).
U.S. v. *United States Steel Corp.,* 251 U.S. 417 (1920).
U.S. v. *Aluminum Co. of America,* Equity No. 85-73, in D.C. of U.S., S.D. of N.Y. Decided October 9, 1941.

[34] *Cf., e.g.,* Mr. Justice McKenna's derisive remarks on the testimony of professional economists, in *U.S.* v. *U.S. Steel Corp.,* 251 U.S. 417, 448-9 (1920). Even Mr. Justice Stone in *Cement Mfrers. Protective Ass'n.* v. *U.S.,* 268 U.S. 588, 597-9 (1925) preferred his own improvised analysis of the significance of a delivered price system to that of professional economists with excellent credentials (Professors Fetter and Commons).

[35] To cite only a few representative cases in which the dominance, however obtained, of one or a very few firms has been regarded as not of itself inimical to the policy of the law:
U.S. v. *American Can Co.,* 230 Fed. 859, 234 Fe. 1019 (1915).
U.S. v. *United Shoe Machinery Co.,* 247 U.S. 32 (1918).
Buckeye Powder Co. v. *E. I. du Pont de Nemours & Co.,* 248 U.S. 55 (1918).
Geddes v. *Anaconda Copper Mining Co.,* 254 U.S. 590 (1921).
U.S. v. *General Electric Co.,* 272 U.S. 476 (1926).
U.S. v. *International Harvester Co.,* 274 U.S. 693 (1927).

[36] M A. Copeland, *et al., Governmental Purchasing—An Economic Commentary,* monog. no. 19.

taneous price changes,[37] uniform delivered prices,[38] and sustained price differentials in domestic and export trade,[39] or in sales of the same products for different uses or to different classes of customers.[40]

Nor have Congress and the state legislatures evinced a steadfast determination to uphold antitrust policy. They have not hesitated in deference to the clamor of special interests to grant exemptions, suspensions, and modifications which could not fail to have an obstructive, in some cases a virtually emasculative, effect upon antitrust policy. Since 1914 the trend of federal regulatory legislation is indicated by such statutes as the Shipping act of 1916 as amended by the Merchant Marine acts of 1920, 1928 and 1936,[41] the Webb-Pomerene act of 1918,[42] the Fishing Industry act of 1934,[43] the Bituminous Coal Conservation act of 1935 and its successor, the Bituminous Coal act of 1937,[44] the Robinson-Patman amendment,[45] and the Miller-Tydings amendment.[46] In addition to the foregoing legislation, there is a long list of federal statutes granting virtual exemption from the antitrust laws to agriculture,[47] and the National Industrial Recovery act

[37] See S. Nelson and W. G. Keim, *Price Behavior and Business Policy,* monog. no. 1, *passim;* C. A. Pearce, *Trade Association Survey,* monog. no. 18, *passim;* and C. Wilcox, *Competition and Monopoly in American Industry,* monog. no. 21, *passim.*

[38] See W. G. Keim and Associates, *Geographical Differentials in Prices of Building Materials,* monog. no. 33; J. M. Blair and A. Reeside, *Price Discrimination in Steel,* monog. no. 41; Federal Trade Commission, *The Basing Point Problem,* monog. no. 42; and R. C. Cook, *Control of the Petroleum Industry by Major Oil Companies,* monog. no. 39, pp. 43-44, 48.

[39] See M. Gilbert and P. D. Dickens, *Export Prices and Export Cartels,* monog. no. 6, pp. 74-81.

[40] See S. Nelson and W. G. Keim, *op. cit.,* pp. 80 *ff.,* C. L. James, *et al., Industrial Concentration and Tariffs,* monog. no. 10, *passim, e.g.,* gypsum, p. 39, and plate glass, p. 51; and D. Bertrand, *et al., The Motion Picture Industry—A Pattern of Control,* monog. no. 43, p. 43, *et passim.* See also Brief for the United States in *U.S.* v. *Aluminum Co. of America, cit. supra.*

On the significance of price discrimination in relation to market control, compare J. M. Clark, *Studies in the Economics of Overhead Costs* (Chicago, 1923) chap. 20, and the writer's article on "Price Discrimination" in the *Encyclopedia of the Social Sciences,* Vol. XII, pp. 350-55. While it may be true that sporadic, irregular discriminations may signalize a sort of surreptitious competition in an otherwise monopolistic market, sustained discriminations are hardly compatible with free competition. They are an infallible index of monopoly.

[41] U.S. Code, Title 46, chaps. 23, 24, 24A and 27.

[42] U.S. Code, Title 15, chap. 2, secs. 61-65.

[43] U.S. Code, Title 15, chap. 13A, sec. 521.

[44] U.S. Code, Title 15, chap. 17.

[45] U.S. Code, Title 15, chap. 1, sec. 13, as amended by act of June 19, 1936.

[46] U.S. Code, Title 15, chap. 1, sec. 1, as amended by act of August 17, 1937.

[47] Agricultural Marketing Association act of February 18, 1922, U.S. Code, Title 7, chap. 12.

Coöperative Marketing act of 1926, U.S. Code, Title 7, chap. 18.

of 1933-35 providing generally for an interlude in antitrust enforcement.[48] Nor can one afford to overlook in this connection the headlong, if not heedless, rush of the several states latterly, not only to follow the lead of Congress, but to outdo it—and each other—in sanctioning trade restraints and fettering competitive forces.[49] The cumulative influence of these developments has been a factor of no small moment in frustrating the efforts of Antitrust to effectuate the policy of the law.

It is plain that in the foregoing circumstances, at least, antitrust policy has not met the pragmatic test. The tendency toward concentration of economic power has not been arrested. In some spheres a feudal hegemony has been established and maintained seemingly without challenge, as in sulphur, bearing metals, borax, molybdenum, oxyacetylene, plastics, plate glass, and gypsum.[50] In others, it has developed and persisted despite sporadic and ineffectual efforts to curb manifest restraints, as in steel, tin cans, refractories, cement, aluminum, copper, sugar, nitrogen, radio, motion pictures. In still others domination of the market has survived repeated prosecutions and frequent adverse decrees as in oil, tobacco, lumber, anthracite coal, meat packing, office equipment, and photographic supplies.[51] On the other hand, there

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Tobacco Control act of 1935, U.S. Code, Title 7, chap. 21B.

Agricultural Adjustment acts of 1933 and 1938, as amended, U.S. Code, Title 7, chap. 35, secs. 1281-1406.

Sugar Production and Control act of 1937, as amended, U.S. Code, Title 7, chap. 34.

[48] Act of June 16, 1933, U.S. Code, Title 15, chap. 15, secs. 701-12. Certain provisions were declared unconstitutional in *Schechter Poultry Corp.* v. *U.S.*, 295 U.S. 475 (1935). Compare: L. S. Lyon and others, *National Recovery Administration* (Washington, 1935), and President's Committee of Industrial Analysis, *Final Report* (Washington, 1937), 75th Cong., 1st sess., H. Doc. 158.

[49] Some 45 states now have so-called "fair trade" statutes validating resale price maintenance. See Commerce Clearing House, *Trade Regulation Service,* Vol. II, p. 10001. And 31 states forbid sales below cost and/or similar "unfair practices." *Ibid.,* p. 9002. In addition, numerous states have enacted discriminatory chain-store tax legislation, business boundary laws (limiting the lines of trade in which particular enterprises may engage or types of service they may render), and a wide variety of other measures designed to preserve or advance the interests of local trade or special groups. See "Symposium on Governmental Marketing Barriers," *Law and Contemporary Problems,* Vol. VIII, No. 2 (1941).

These developments were sharply criticized by numerous witnesses in the Hearings, Pt. 29, *Interstate Trade Barriers.* In the monographs they received less attention, and the tone of the treatment was in general more explanatory and less censorious. Compare, J. H. Cover *et al., Problems of Small Business,* monog. no. 17, and B. W. Lewis *et al., Economic Standards of Governmental Price Control,* monog. no. 32, Pts. 2 and 4.

[50] These and other industries listed below are selected at random from those discussed in the Hearings and monographs. The most comprehensive survey, but not the most penetrating and incisive study, of the structural features of industry among the T.N.E.C. monographs is Clair Wilcox's *Competition and Monopoly in American Industry,* monog. no. 21.

[51] It is not to be inferred, of course, that judgments adverse to defendants, whether or not accompanied by dissolution decrees, have had (1) no effect whatever in relation to market control, or (2) the same effect in every instance cited. The detailed analysis of the

are familiar examples, like bituminous coal, cotton textiles, leather, rubber, and shoes, of industries in which competition may be unrestricted, perhaps too severe, but in which in any case the adjustments of supply and demand, the composition of private interests, are not invariably smooth and economically advantageous. Still other industries conform to none of these patterns. The whole range of trades serving essentially local markets may be here tied up in vice-like restraints, there flexibly competitive, elsewhere conducted in a sanguinary rivalry that leaves ruin—or racketeering—in its wake.

Manifestly the diffusion of industrial control at which the Antitrust act aimed has not been realized. The spontaneous assertion of diverse private interests, each accommodating itself to the demands of opposing interests with a minimum of friction, and all held in check within decorous limits by the occasional intervention of Antitrust to admonish an overzealous aggressor or reprove a misguided conspirator, remains a remote ideal. With the years the mobilization of industrial resources, human and material, into ever larger aggregates, with attendant concentration of economic power, has proceeded, not unchecked, but despite the law and administration of Antitrust. New and subtle restraints, perhaps operating in the guise of statistical exchanges, basing point systems, standardization programs, or estimate bureaus, have displaced the old piratical practices and gentlemen's agreements which entailed too much risk of public obloquy and legal penalty. In the corporate labyrinths of big business, management has become further and further divorced from ownership and in its consequent irresponsibility has been enabled to provide amply for its own "social security." Wage-earners have lost much of their independence. They produce, perforce, what they are told to produce, in the way they are told to do it, humbly grateful for the opportunity which a job affords, when one happens to be available, bitterly resentful of the implications of a discharge which comes through no fault of theirs. Consumers may not admit their resemblance to guinea pigs, but, powerless to escape the ubiquitous promptings of advertisement, they find resistance to its appeals an industry of diminishing returns.[52]

changing patterns of control in these industries, and others which might be added, is clearly beyond the compass of the present paper. It requires, indeed, a whole book to make a satisfactory study of even a single branch of, for example, the chemical industries as Professor T. J. Kreps discovered, or at any rate demonstrated, in his work on *The Economics of the Sulphuric Acid Industry*.

Nevertheless, generalizations cannot be avoided altogether if any constructive use is to be made of experience in formulating policy. If the specific generalizations here made were challenged, the answer would be an appeal to the T.N.E.C. record—and, if need be, to whatever data outside that record might be available.

[52] By and large, adequate substitutes for a product appear to be available approximately in inverse proportion to the extent that the claims of its excellence are, may one say, exaggerated. This is hardly a coincidence.

But if Antitrust were implemented with sharper tools and provided with ample resources; if the unwonted vigilance and energy recently displayed in the execution of its police assignment could be sustained; if a better coördination of antitrust policy with other regulatory policies and a more consistent adherence thereto by the lawmakers could be assured; and finally if more definite criteria were developed and more unflinchingly applied by the judiciary—what then? Would Antitrust suffice? Could these more favorable conditions be assured? No one can answer these questions with certainty. But it may be doubted that even if antitrust policy were wholeheartedly supported and firmly enforced by the legislatures, the courts, and the administrative agencies it could, by itself, restore or insure a competition at once forthright and salutary in modern markets.[53] The grounds for that doubt are spread upon the records of the T.N.E.C., through 82 volumes of testimony and reports.

The trouble lies deeper than in mere market-manipulating schemes. It lies in the forms of organization and the mode of functioning of business enterprise itself, from which competitive forces spring or in which they are stifled. Year by year the control of industry has become more of a special privilege. In the corporate units of business enterprise, the interests of investors, the interests of workers, the interests of consumers have been subordinated to the quest of inside cliques for power, prestige, and profits (pelf might be a better word).[54] It is a commonplace that management has been divorced from ownership. The fact is, it has in large measure been divorced from responsibility, and therewith, and to that extent, spontaneous enterprise has been extinguished and competitive forces devitalized. The erratic operation of industries subject to such irresponsible management, with a pattern of control so unbalanced, cannot indefinitely be suffered. Antitrust is not enough.

But Antitrust was never put forward as an ultimate solution of the perennial issue of public policy. It represented no more than an initial step. And it was a beginning in the right direction. It was an assertion that the public interest in the conduct of industry is paramount to any private interest. This was a gesture that needs no apology, a step that

[53] *Cf.*, Corwin D. Edwards, "Can the Antitrust Laws Preserve Competition?" *Amer. Econ. Rev.*, Suppl., Vol. XXX (1940), p. 164.

[54] "The proof of the pudding" is in the exigent circumstances which have constrained the three vital economic interests subordinated to business interests to seek, and a democratic government to grant, each in turn special administrative protection. The S.E.C. was established to safeguard the interests of investors who, in the current organization of industrial control, found themselves disfranchised and defenseless. Likewise, the N.L.R.B. was set up as a means of protection of the interests of labor and the F.T.C. (and several other administrative agencies, such as the Food, Drugs and Cosmetics Administration) in defense of consumer interests.

needs no retracing. It is true that Antitrust has essentially a negative thrust. It can, on occasion, eradicate restraints privately laid on an industry, forbid surreptitious toll-taking on the channels of trade. It has no power to initiate realignments in the structure of an industry which may promise enhanced efficiency, no authority to cultivate new trade practices, selling policies, or investment programs which might stabilize a distraught industry. Above all, it has no mandate to establish standards for the organization of the corporate units of business enterprise which will insure their responsible management, their healthy functioning as the very cells of the body economic. As a licensed physician to the economy, it is limited to the practice of surgery. Fifty years ago preventive medicine was regarded by robust men as vapid quackery. Times change.

Comes the emergency! If Antitrust is not enough, some would say let us scrap it, or at the least let us shelve it, as in 1933. If monopolistic competition, restrictive devices, privately administered prices are so prevalent that, before Antitrust can fulfill its appointed function and provide reasonably adequate defense of minority groups, inarticulate interests, incipient enterprise, the whole structure of industry must be rebuilt, decentralized, perhaps reorganized on coöperative lines, that is too large a task to undertake now, we are told. In so far we are well advised. Wartime pressures, anxieties, fears are not conducive to an amicable reconstruction of the bases of industrial control which in any event must involve some sacrifice of vested interests, considerable tutelage in new responsibilities, and groping accommodation to altered relationships.

But it does not follow from the admission that Antitrust is not enough that it can safely and advantageously be suspended, even in a time of crisis. What a national defense program or a war production program undoubtedly requires is the mobilization, coördination, and direction of industry as a unit. With the issuance and enforcement of government *orders* that this shall be done and that shall not be done, Antitrust has no quarrel and in no wise interferes. But with privately contrived stratagems involving mutually imposed restraints of trade, either beyond the scope of the governmental orders or designed to influence their terms, Antitrust does interfere.[55] Signs are not wanting today that, if vigilant efforts to free the economy of "voluntary" restraints unwarrantedly imposed for the benefit of special interests were abandoned, the experience of 1917-18 and of 1933-35 would be repeated.[56] For the protection of the public interest, which government

[55] See *Annual Report* of Assistant Attorney General Thurman Arnold, in charge of Antitrust Division, for the year ending June 30, 1941.

[56] Detailed studies of specific industries reveal beyond shadow of doubt that expansion

was constituted to safeguard and promote, can reliance be placed upon the patriotic animus and dollar-a-year self-immolation of special interests?

Antitrust is not enough, true. But at least it sets some limits to predacious actions. It cannot assure forthright competition (even if that were everywhere desirable), but it can and does provide a leverage for the promotion of adjustments (in prices, output, investment) toward the competitive standard of full utilization of resources. By freeing industry, in some measure, of the obstructions which have been, and constantly are being, fastened upon it by lopsided patterns of control (undue concentration in private hands of discretionary economic power), its effective contribution to national defense will be by so much advanced. Even more important, by the assurance given a people by its government through a vigorous policy of antitrust enforcement that it is earnestly bent upon making industry an instrument of the common welfare, not a means to the brazen aggrandizement of some special interest, it will fortify their spirit and seal their loyalty for the hard tests which lie ahead. For, after all, support of Antitrust is a pledge of good faith in the avowed devotion to a democratic way of life. No government which is itself founded on the principle of consent of the governed can afford to retreat from that principle in its policy with respect to the control of industry.

For the long run—what then? If this be for the night, "Watchman, what of the morrow?" When the reconstruction of the government of industry upon a genuinely democratic basis can be safely essayed, what shall the model be? Assuming that the Fates grant us that privilege, but without pretension to a foresight adequate to anticipate what the complexion or balance of economic forces may then be, this alone may be ventured. If the goal be accepted of a wide diffusion of industrial control, of a democratic sharing in the responsibilities of industrial government, it will not be achieved by reform from top to bottom. It will come only through reconstruction from the bottom up. So long as the irresponsible management of giant corporations persists, the attempt to preserve competition in the markets through a policy of admonishing the custodians of this privilege to be "good" and not "restrain trade,"

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of production of materials vitally necessary for the conduct of the war is in many instances, even now, being geared to military requirements only to the extent that provision of these requirements is compatible with a cautious estimate of the profit-making prospects of expanded facilities. The root cause of these tactics is plain: the reluctance of interested parties to relinquish the restrictive devices or relax the restrictive policies upon which monopolistic gains depend.

"Antitrust investigations during the past year have shown that there is not an organized basic industry in the United States which has not been restricting production by some device or other in order to avoid what they call 'ruinous over-production after the war.'" From *Annual Report* of Assistant Attorney General Thurman Arnold (1941), p. 1.

which is to say through antitrust policy as it stands today, will fall short of the goal.

The *sine qua non* for an effective assertion of the public interest in the conduct of business is the establishment, or if you prefer the re-establishment, of responsible management. That can only be done through a reorganization of the corporate units of enterprise in such fashion that the vital economic interests now disfranchised shall be represented in the councils where, in the first instance, decisions are made, policies formed, operating results determined, and management obliged periodically to account. Such a reorganization can be affected only through federal incorporation.[57] Competition in franchise-granting among the states, their so-called charter-mongering, is incompatible with the erection and maintenance of salutary standards of managerial responsibility.

It is the failure to recognize this basic fact and to appreciate its implications which accounts, one must suppose, for the timidity and temporizing which mark the conclusions of what might have been one of the most significant studies among the T.N.E.C. monographs. The authors of *Bureaucracy and Trusteeship in Large Corporations* (monograph no. 11) find ample grounds for criticism of the manner in which self-perpetuating and self-serving managements have perverted the functions of enterprise. But their conception of how this perversion may be abated is singularly naïve. They would trust to the voluntary acceptance of fiduciary obligations by autocratic managements shorn of none of their privileges, this acceptance to be won somehow through the pleadings and "expectations" of the patient public. The only alternative to "trusteeship" which they envisage is the imposition of "additional control over management" by government.[58] In these circumstances they are apprehensive, and justly so, that "regulation may defeat its own purpose. . . . However, it might be of substantial assistance if some governmental body, such as the Temporary National Economic Committee, would deplore the present tendency. . . . It may not be necessary to enact legislation. . . . We suggest that less drastic means should first be tried. Well-thought-out advice and publicity, for example. . . . A widespread, favorable attitude of mind is a first essential to effective

[57] See the writer's memorandum in *Relative Efficiency of Large, Medium-Sized and Small Business*, monog. no. 13, Appendix A.

[58] Presumably this means a public utility type of regulation. *Bureaucracy and Trusteeship in Large Corporations*, monog. no. 11, p. 123. There is no implication in the discussion in the text above of criticism or derision of the concept of trusteeship *per se*. In fact, a decade ago the writer supported, as he would still support, the development of intra-corporate trustee relationships. See his "Trustification and Economic Theory," *Am. Econ. Rev.*, Suppl., Vol. XXI (March, 1931) p. 54. But it is one thing to impose and enforce fiduciary obligations; it is quite another matter to trust to the slow emergence of quasi-professional standards among business executives.

trusteeship in big business. People must expect and assume that managers will look out for interests other than their own. Managers in their turn will then attempt to live up to expectations."[59]

Such faith may be sublime—or puerile. Whichever it is, not cynics alone will be skeptical of its adequacy to sustain popular patience and good will pending its realization. Realists, too, will have their reservations. It is encouraging to find among those who appreciate the imperative need of supplementing Antitrust, by restoring industry to responsible management, if its wholesome ends are to be achieved, no less a realist than the chairman of the Temporary National Economic Committee itself. His Final Statement is after the model of the President's letter which initiated the inquiry: lucid yet compact, impartial yet discriminative.

> The first and most necessary step is to recognize that we must have a national rule for national business. . . . If we desire to have business carried on by collective units, and it must be carried on thus in the modern world, then we must find the way to make these units thoroughly democratic. Economic freedom and political freedom go hand in hand. Neither can survive without the other, and since . . . in a republic the government of all the people must be able to speak for all the people . . . we have no recourse except to have that government define the rights, duties and responsibilities of the organized agencies which conduct and control the commerce on which its citizens depend for employment and income.
>
> It is idle to think that the huge collective institutions which carry on our modern business can continue to operate without more definite responsibility to all the people of the Nation than they now have. To do this it will be necessary, in my judgment, to have a national charter system for all national corporations.[60]

For those who have not succumbed to stark cynicism from contemplating or experiencing our last two "reconstruction periods," in this evidence of economic statesmanship triumphant over political poltroonery may be found a ray of hope to sustain them through the trials that now beset us, and the still greater trials that lie ahead.[61]

University College
New York University

[59] *Bureaucracy and Trusteeship*, monog. no. 11, pp. 125-33.

[60] *Final Report and Recommendations of the Temporary National Economic Committee*, S. Doc. 35, 77th Cong., 1st sess. (March 31, 1941), p. 681.

[61] The author wishes here gratefully to acknowledge his indebtedness to the following persons who kindly consented to read the manuscript in its original form. Of their criticisms he has endeavored, though doubtless with less success than they might have achieved directly, to take full advantage. Messieurs Moses Abramowitz, M. M. Bober, Joseph Borkin, Corwin Edwards, George J. Stigler, George W. Stocking, and Charles S. Welsh.

APPENDIX A

Message From the President of the United States Transmitting Recommendations Relative to the Strengthening and Enforcement of Anti-trust Laws[1]

To the Congress of the United States:

Unhappy events abroad have retaught us two simple truths about the liberty of a democratic people.

The first truth is that the liberty of a democracy is not safe if the people tolerate the growth of private power to a point where it becomes stronger than their democratic state itself. That, in its essence, is fascism—ownership of government by an individual, by a group, or by any other controlling private power.

The second truth is that the liberty of a democracy is not safe if its business system does not provide employment and produce and distribute goods in such a way as to sustain an acceptable standard of living.

Both lessons hit home.

Among us today a concentration of private power without equal in history is growing.

This concentration is seriously impairing the economic effectiveness of private enterprise as a way of providing employment for labor and capital and as a way of assuring a more equitable distribution of income and earnings among the people of the Nation as a whole.

I. The Growing Concentration of Economic Power

Statistics of the Bureau of Internal Revenue reveal the following amazing figures for 1935:

"Ownership of corporate assets: Of all corporations reporting from every part of the Nation, one-tenth of 1 per cent of them owned 52 per cent of the assets of all of them.

"And to clinch the point: Of all corporations reporting, less than 5 per cent of them owned 87 per cent of all the assets of all of them.

"Income and profits of corporations: Of all the corporations reporting from every part of the country, one-tenth of 1 per cent of them earned 50 per cent of the net income of all of them.

"And to clinch the point: Of all the manufacturing corporations reporting, less than 4 per cent of them earned 84 per cent of all the net profits of all of them."

The statistical history of modern times proves that in times of depression concentration of business speeds up. Bigger business then has larger opportunity to grow still bigger at the expense of smaller competitors who are weakened by financial adversity.

The danger of this centralization in a handful of huge corporations is not reduced or eliminated, as is sometimes urged, by the wide public distribution

[1] S. Doc. No. 173, 75th Cong., 3rd. sess.

of their securities. The mere number of security holders gives little clue to the size of their individual holdings or to their actual ability to have a voice in the management. In fact, the concentration of stock ownership of corporations in the hands of a tiny minority of the population matches the concentration of corporate assets.

The year 1929 was a banner year for distribution of stock ownership.

But in that year three-tenths of 1 per cent of our population received 78 per cent of the dividends reported by individuals. This has roughly the same effect as if, out of every 300 persons in our population, 1 person received 78 cents out of every dollar of corporate dividends while the other 299 persons divided up the other 22 cents among them.

The effect of this concentration is reflected in the distribution of national income.

A recent study by the National Resources Committee shows that in 1935-36—

"Forty-seven per cent of all American families and single individuals living alone had incomes of less than $1,000 for the year; and at the other end of the ladder a little less than 1½ per cent of the Nation's families received incomes which in dollars and cents reached the same total as the incomes of the 47 per cent at the bottom."

Furthermore, to drive the point home, the Bureau of Internal Revenue reports that estate tax returns in 1936 show that—

"Thirty-three per cent of the property which was passed by inheritance was found in only 4 per cent of all the reporting estates. (And the figures of concentration would be far more impressive, if we included all the smaller estates which, under the law, do not have to report.)"

We believe in a way of living in which political democracy and free private enterprises for profit should serve and protect each other—to insure a maximum of human liberty not for a few but for all.

It has been well said that, "The freest government, if it could exist, would not be long acceptable if the tendency of the laws were to create a rapid accumulation of property in few hands, and to render the great mass of the population dependent and penniless."

Today many Americans ask the uneasy question: Is the vociferation that our liberties are in danger justified by the facts?

Today's answer on the part of average men and women in every part of the country is far more accurate than it would have been in 1929 for the very simple reason that during the past 9 years we have been doing a lot of common-sense thinking. Their answer is that if there is that danger it comes from that concentrated private economic power which is struggling so hard to master our democratic government. It will not come, as some (by no means all) of the possessors of that private power would make the people believe—from our democratic government itself.

II. Financial Control over Industry

Even these statistics I have cited do not measure the actual degree of concentration of control over American industry.

Close financial control, through interlocking spheres of influence over channels of investment, and through the use of financial devices like holding companies and strategic minority interests, creates close control of the business policies of enterprises which masquerade as independent units.

That heavy hand of integrated financial and management control lies upon large and strategic areas of American industry. The small-business man is unfortunately being driven into a less and less independent position in American life. You and I must admit that.

Private enterprise is ceasing to be free enterprise and is becoming a cluster of private collectivisms; making itself as a system of free enterprise after the American model, it is in fact becoming a concealed cartel system after the European model.

We all want efficient industrial growth and the advantages of mass production. No one suggests that we return to the hand loom or hand forge. A series of processes involved in turning out a given manufactured product may well require one or more huge mass-production plants. Modern efficiency may call for this. But modern efficient mass production is not furthered by a central control which destroys competition between industrial plants each capable of efficient mass production while operating as separate units. Industrial efficiency does not have to mean industrial empire building.

And industrial empire building, unfortunately, has evolved into banker control of industry. We oppose that.

Such control does not offer safety for the investing public. Investment judgment requires the disinterested appraisal of other people's management. It becomes blurred and distorted if it is combined with the conflicting duty of controlling the management it is supposed to judge.

Interlocking financial controls have taken from American business much of its traditional virility, independence, adaptability, and daring—without compensating advantages. They have not given the stability they promised.

Business enterprise needs new vitality and the flexibility that comes from the diversified efforts, independent judgments and vibrant energies of thousands upon thousands of independent businessmen.

The individual must be encouraged to exercise his own judgment and to venture his own small savings, not in stock gambling but in new enterprise investment. Men will dare to compete against men but not against giants.

III. The Decline of Competition and Its Effects on Employment

In output per man or machine we are the most efficient industrial nation on earth.

In the matter of complete mutual employment of capital and labor we are among the least efficient.

Our difficulties of employing labor and capital are not new. We have had them since good, free land gave out in the West at the turn of the century. They were old before we undertook changes in our tax policy or in our labor and social legislation. They were caused not by this legislation but by the same forces which caused the legislation. The problem of bringing idle men and idle money together will not be solved by abandoning the forward steps we have

taken to adjust the burdens of taxation more fairly and to attain social justice and security.

If you believe with me in private initiative, you must acknowledge the right of well-managed small business to expect to make reasonable profits. You must admit that the destruction of this opportunity follows concentration of control of any given industry into a small number of dominating corporations.

One of the primary causes of our present difficulties lies in the disappearance of price competition in many industrial fields, particularly in basic manufacture where concentrated economic power is most evident and where rigid prices and fluctuating pay rolls are general.

Managed industrial prices mean fewer jobs. It is no accident that in industries like cement and steel where prices have remained firm in the face of a falling demand pay rolls have shrunk as much as 40 and 50 per cent in recent months. Nor is it mere chance that in most competitive industries where prices adjust themselves quickly to falling demand, pay rolls and employment have been far better maintained. By prices we mean, of course, the prices of the finished articles and not the wages paid to workers.

When prices are privately managed at levels above those which would be determined by free competition, everybody pays.

The contractor pays more for materials; the homebuilder pays more for his house; the tenant pays more rent; and the worker pays in lost work.

Even the Government itself is unable, in a large range of materials, to obtain competitive bids. It is repeatedly confronted with bids identical to the last cent.

Our housing shortage is a perfect example of how ability to control prices interferes with the ability of private enterprise to fill the needs of the community and provide employment for capital and labor.

On the other hand, we have some lines of business, large and small, which are genuinely competitive. Often these competitive industries must buy their basic products from monopolistic industry, thus losing, and causing the public to lose, a large part of the benefit of their own competitive policy. Furthermore, in times of recession, the practices of monopolistic industries make it difficult for business or agriculture, which is competitive and which does not curtail production below normal needs, to find a market for its goods even at reduced prices. For at such times a large number of customers of agriculture and competitive industry are being thrown out of work by those noncompetitive industries which choose to hold their prices rather than to move their goods and to employ their workers.

If private enterprise left to its own devices becomes half-regimented and half-competitive, half-slave and half-free, as it is today, it obviously cannot adjust itself to meet the needs and the demands of the country.

Most complaints for violations of the antitrust laws are made by businessmen against other businessmen. Even the most monopolistic businessman disapproves of all monopolies but his own. We may smile at this as being just an example of human nature, but we cannot laugh away the fact that the combined effect of the monopolistic controls which each business group imposes for its own benefit inevitably destroys the buying power of the Nation as a whole.

IV. Competition Does Not Mean Exploitation

Competition, of course, like all other good things, can be carried to excess. Competition should not extend to fields where it has demonstrably bad social and economic consequences. The exploitation of Child labor, the chiseling of workers' wages, the stretching of workers' hours, are not necessary, fair, or proper methods of competition. I have consistently urged a Federal wages-and-hours bill to take the minimum decencies of life for the working man and woman out of the field of competition.

It is, of course, necessary to operate the competitive system of free enterprise intelligently. In gaging the market for their wares businessmen, like the farmers, should be given all possible information by government and by their own associations so that they may act with knowledge and not on impulse. Serious problems of temporary overproduction can and should be avoided by disseminating information that will discourage the production of more goods than the current markets can possibly absorb or the accumulation of dangerously large inventories for which there is no obvious need.

It is, of course, necessary to encourage rises in the level of those competitive prices, such as agricultural prices, which must rise to put our price structure into more workable balance and make the debt burden more tolerable. Many such competitive prices are now too low.

It may at times be necessary to give special treatment to chronically sick industries which have deteriorated too far for natural revival, especially those which have a public or quasi-public character.

But generally over the field of industry and finance we must revive and strengthen competition if we wish to preserve and make workable our traditional system of free private enterprise.

The justification of private profit is private risk. We cannot safely make America safe for the businessman who does not want to take the burdens and risks of being a businessman.

V. The Choice Before Us

Examination of methods of conducting and controlling private enterprise which keep it from furnishing jobs or income or opportunity for one-third of the population is long overdue on the part of those who sincerely want to preserve the system of private enterprise for profit.

No people, least of all a democratic people, will be content to go without work or to accept some standard of living which obviously and woefully falls short of their capacity to produce. No people, least of all a people with our traditions of personal liberty, will endure the slow erosion of opportunity for the common man, the oppressive sense of helplessness under the domination of a few, which are overshadowing our whole economic life.

A discerning magazine of business has editorially pointed out that big-business collectivism in industry compels an ultimate collectivism in government.

The power of a few to manage the economic life of the Nation must be diffused among the many or be transferred to the public and its democratically

responsible government. If prices are to be managed and administered, if the Nation's business is to be allotted by plan and not by competition, that power should not be vested in any private group or cartel, however benevolent its professions profess to be.

Those people, in and out of the halls of government, who encourage the growing restriction of competition either by active efforts or by passive resistance to sincere attempts to change the trend, are shouldering a terrific responsibility. Consciously or unconsciously they are working for centralized business and financial control. Consciously or unconsciously they are therefore either working for control of the Government itself by business and finance or the other alternative—a growing concentration of public power in the Government to cope with such concentration of private power.

The enforcement of free competition is the least regulation business can expect.

VI. A Program

The traditional approach to the problems I have discussed has been through the antitrust laws. That approach we do not propose to abandon. On the contrary, although we must recognize the inadequacies of the existing laws, we seek to enforce them so that the public shall not be deprived of such protection as they afford. To enforce them properly requires thorough investigation not only to discover such violations as may exist but to avoid hit-and-miss prosecutions harmful to business and government alike. To provide for the proper and fair enforcement of the existing antitrust laws I shall submit, through the Budget, recommendations for a deficiency appropriation of $200,000 for the Department of Justice.

But the existing antitrust laws are inadequate—most importantly because of new financial economic conditions with which they are powerless to cope.

The Sherman Act was passed nearly 40 years ago. The Clayton and Federal Trade Commission Acts were passed over 20 years ago. We have had considerable experience under those acts. In the meantime we have had a chance to observe the practical operation of large-scale industry and to learn many things about the competitive system which we did not know in those days.

We have witnessed the merging out of effective competition in many fields of enterprise. We have learned that the so-called competitive system works differently in an industry where there are many independent units, from the way it works in an industry where a few large producers dominate the market.

We have also learned that a realistic system of business regulation has to reach more than consciously immoral acts. The community is interested in economic results. It must be protected from economic as well as moral wrongs. We must find practical controls over blind economic forces as well as over blindly selfish men.

Government can deal and should deal with blindly selfish men. But that is a comparatively small part—the easier part—of our problem. The larger, more important, and more difficult part of our problem is to deal with men who are not selfish and who are good citizens, but who cannot see the social and economic consequences of their actions in a modern economically interdependent

community. They fail to grasp the significance of some of our most vital social and economic problems because they see them only in the light of their own personal experience and not in perspective with the experience of other men and other industries. They therefore fail to see these problems for the Nation as a whole.

To meet the situation I have described, there should be a thorough study of the concentration of economic power in American industry and the effect of that concentration upon the decline of competition. There should be an examination of the existing price system and the price policies of industry to determine their effect upon the general level of trade, upon employment, upon long-term profits, and upon consumption. The study should not be confined to the traditional antitrust field. The effects of tax, patent, and other Government policies cannot be ignored.

The study should be comprehensive and adequately financed. I recommend an appropriation of not less than $500,000 for the conduct of such comprehensive study by the Federal Trade Commission, the Department of Justice, the Securities and Exchange Commission, and such other agencies of government as have special experience in various phases of the inquiry.

I enumerate some of the items that should be embraced in the proposed study. The items are not intended to be all inclusive. One or two of the items, such as bank holding companies and investment trusts, have already been the subject of special study, and legislation concerning these need not be delayed.

(1) *Improvement of antitrust procedure.*—A revision of the existing antitrust laws should make them susceptible of practical enforcement by casting upon those charged with violations the burden of proving facts peculiarly within their knowledge. Proof by the Government of identical bids, uniform price increases, price leadership, higher domestic than export prices, or other specified price rigidities might be accepted as prima facie evidence of unlawful actions.

The Department of Justice and the Federal Trade Commission should be given more adequate and effective power to investigate whenever there is reason to believe that conditions exist or practices prevail which violate the provisions or defeat the objectives of the antitrust laws. If investigation reveals border-line cases where legitimate coöperative efforts to eliminate socially and economically harmful methods of competition in particular industries are thwarted by fear of possible technical violations of the antitrust laws, remedial legislation should be considered.

As a really effective deterrent to personal wrongdoing, I would suggest that where a corporation is enjoined from violating the law, the court might be empowered to enjoin the corporation for a specified period of time from giving any remunerative employment or any official position to any person who has been found to bear a responsibility for the wrongful corporate action.

As a further deterrent to corporate wrongdoing the Government might well be authorized to withhold Government purchases from companies guilty of unfair or monopolistic practice.

(2) *Mergers and interlocking relationships.*—More rigid scrutiny through the Federal Trade Commission and the Securities and Exchange Commission

of corporate mergers, consolidations, and acquisitions than that now provided by the Clayton Act to prevent their consummation when not clearly in the public interest; more effective methods for breaking up interlocking relationships and like devices for bestowing business by favor.

(3) *Financial controls.*—The operations of financial institutions should be directed to serve the interests of independent business and restricted against abuses which promote concentrations of power over American industry.

(*a*) *Investment trusts.*—Investment trusts should be brought under strict control to insure their operations in the interests of their investors rather than of their managers. The Securities and Exchange Commission is to make a report to Congress on the results of a comprehensive study of investment trusts and their operations which it has carried on for nearly 2 years. The investment trust, like the holding company, puts huge aggregations of the capital of the public at the direction of a few managers. Unless properly restricted, it has potentialities of abuse second only to the holding company as a device for the further centralization of control over American industry and American finance.

The tremendous investment funds controlled by our great insurance companies have a certain kinship to investment trusts, in that these companies invest as trustees the savings of millions of our people. The Securities and Exchange Commission should be authorized to make an investigation of the facts relating to these investments with particular relation to their use as an instrument of economic power.

(*b*) *Bank holding companies.*—It is hardly necessary to point out the great economic power that might be wielded by a group which may succeed in acquiring domination over banking resources in any considerable area of the country. That power becomes particularly dangerous when it is exercised from a distance and notably so when effective control is maintained without the responsibilities of complete ownership.

We have seen the multiplied evils which have arisen from the holding-company system in the case of public utilities, where a small minority ownership has been able to dominate a far-flung system.

We do not want those evils repeated in the banking field, and we should take steps now to see that they are not.

It is not a sufficient assurance against the future to say that no great evil has yet resulted from holding-company operations in this field. The possibilities of great harm are inherent in the situation.

I recommend that the Congress enact at this session legislation that will effectively control the operation of bank-holding companies; prevent holding companies from acquiring control of any more banks, directly or indirectly; prevent banks controlled by holding companies from establishing any more branches; and make it illegal for a holding company, or any corporation or enterprise in which it is financially interested, to borrow from or sell securities to a bank in which it holds stock.

I recommend that this bank legislation make provision for the gradual separation of banks from holding-company control or ownership, allowing a reasonable time for this accomplishment—time enough for it to be done in

an orderly manner and without causing inconvenience to communities served by holding-company banks.

(4) *Trade associations.*—Supervision and effective publicity of the activities of trade associations, and a clarification and delineation of their legitimate spheres of activity which will enable them to combat unfair methods of competition, but which will guard against their interference with legitimate competitive practices.

(5) *Patent laws.*—Amendment of the patent laws to prevent their use to suppress inventions, and to create industrial monopolies. Of course, such amendment should not deprive the inventor of his royalty rights, but, generally speaking, future patents might be made available for use by anyone upon payment of appropriate royalties. Open patent pools have voluntarily been put into effect in a number of important industries with wholesome results.

(6) *Tax correctives.*—Tax policies should be devised to give affirmative encouragement to competitive enterprise.

Attention might be directed to increasing the intercorporate dividend tax to discourage holding companies and to further graduating the corporation income tax according to size. The graduated tax need not be so high as to make bigness impracticable, but might be high enough to make bigness demonstrate its alleged superior efficiency.

We have heard much about the undistributed profits tax. When it was enacted 2 years ago, its objective was known to be closely related to the problem of concentrated economic power and a free capital market.

Its purpose was not only to prevent individuals whose incomes were taxable in the higher surtax brackets from escaping personal income taxes by letting their profits be accumulated as corporate surplus. Its purpose was also to encourage the distribution of corporate profits so that the individual recipients could freely determine where they would reinvest in a free capital market.

It is true that the form of the 1936 tax worked a hardship on many of the smaller corporations. Many months ago I recommended that these inequities be removed.

But in the process of the removal of inequities, we must not lose sight of original objectives. Obviously the Nation must have some deterrent against special privileges enjoyed by an exceedingly small group of individuals under the form of the laws prior to 1936, whether such deterrent take the form of an undistributed-profits tax or some other equally or more efficient method. And obviously an undistributed profits tax has a real value in working against a further concentration of economic power and in favor of a freer capital market.

(7) *Bureau of Industrial Economics.*—Creation of a Bureau of Industrial Economics which should be endowed with adequate powers to supplement and supervise the collection of industrial statistics by trade associations. Such a bureau should perform for businessmen functions similar to those performed for the farmers by the Bureau of Agricultural Economics.

It should disseminate current statistical and other information regarding market conditions and be in a position to warn against the dangers of temporary overproduction and excessive inventories as well as against the dangers of shortages and bottleneck conditions and to encourage the maintenance of

orderly markets. It should study trade fluctuations, credit facilities, and other conditions which affect the welfare of the average businessman. It should be able to help small-business men to keep themselves as well informed about trade conditions as their big competitors.

No man of good faith will misinterpret these proposals. They derive from the oldest American traditions. Concentration of economic power in the few and the resulting unemployment of labor and capital are inescapable problems for a modern "private enterprise" democracy. I do not believe that we are so lacking in stability that we will lose faith in our own way of living just because we seek to find out how to make that way of living work more effectively.

This program should appeal to the honest common sense of every independent businessman interested primarily in running his own business at a profit rather than in controlling the business of other men.

It is not intended as the beginning of any ill-considered "trust-busting" activity which lacks proper consideration for economic results.

It is a program to preserve private enterprise for profit by keeping it free enough to be able to utilize all our resources of capital and labor at a profit.

It is a program whose basic purpose is to stop the progress of collectivism in business and turn business back to the democratic competitive order.

It is a program whose basic thesis is not that the system of free private enterprise for profit has failed in this generation, but that it has not yet been tried.

Once it is realized that business monopoly in America paralyzes the system of free enterprise on which it is grafted, and is as fatal to those who manipulate it as to the people who suffer beneath its impositions, action by the Government to eliminate these artificial restraints will be welcomed by industry throughout the Nation.

For idle factories and idle workers profit no man.

FRANKLIN D. ROOSEVELT

THE WHITE HOUSE, *April 29, 1938*

APPENDIX B

JOINT RESOLUTION To create a temporary national economic committee[1]

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established a temporary national economic committee (hereinafter referred to as the "committee"), to be composed of (1) three Members of the Senate, to be appointed by the President of the Senate; (2) three Members of the House of Representatives, to be appointed by the Speaker of the House of Representatives; and (3) one representative from each of the following departments and agencies, to be designated by the respective heads thereof: Department of Justice, Department of the Treasury, Department of Labor, Department of Commerce, the Securities and Exchange Commission, and the Federal Trade Commission. Such representative may designate an alternate to sit and act for him on the committee in his absence. Any such alternate, while so acting, shall have the same rights, powers, and duties as are conferred and imposed upon a member of the committee by this joint resolution. Any member appointed under clauses (1) and (2) may, when unable to attend a meeting of the committee, authorize another such member to act and vote for him in his absence. A vacancy in the committee shall not affect the power of the remaining members to executive [*sic*] the functions of the committee and shall be filled in the same manner as the original selection.

SEC. 2.

It shall be the duty of the committee—

(a) To make a full and complete study and investigation with respect to the matters referred to in the President's message of April 29, 1938, on monopoly and the concentration of economic power in and financial control over production and distribution of goods and services and to hear and receive evidence thereon, with a view to determining, but without limitation, (1) the causes of such concentration and control and their effect upon competition; (2) the effect of the existing price system and the price policies of industry upon the general level of trade, upon employment, upon long-term profits, and upon consumption; and (3) the effect of existing tax, patent, and other Government policies upon competition, price levels, unemployment, profits, and consumption; and shall investigate the subject of governmental adjustment of the purchasing power of the dollar so as to attain 1926 commodity price levels; and

(b) To make recommendation to Congress with respect to legislation upon the foregoing subjects, including the improvement of antitrust policy and procedure and the establishment of national standards for corporations engaged in commerce among the States and with foreign nations.

[1] Pub. Res. No. 113, 75th Cong., chap. 456, 3rd sess.; S. J. Res. 300.

SEC. 3.

(a) The committee shall have power to appoint subcommittees to assist the committee in its work. The members of the committee shall serve without additional compensation but shall be reimbursed for travel, subsistence, and other necessary expenses incurred by them in the exercise of the functions vested in the committee.

(b) The Department of Justice, Department of the Treasury, Department of Labor, Department of Commerce, the Securities and Exchange Commission, and the Federal Trade Commission are directed to appear before the committee or its designee and present evidence by examination of witnesses or the introduction of documents and reports. The evidence presented by each of these agencies shall cover the subject matter of this inquiry which is within its administrative jurisdiction under existing law or which may be assigned to such agencies by the committee. Each such agency is authorized to request the committee to issue such subpoenas as such agency may require for the attendance of witnesses and the production of documents and reports.

(c) The committee shall have power to employ and fix the compensation of such officers, experts, and employees as it deems necessary for the performance of its duties. The committee is authorized to utilize the services, information, facilities, and personnel of the departments and agencies of the Government.

SEC. 4.

(a) Prior to the opening of the first session of the Seventy-sixth Congress or as soon thereafter as is practicable the committee shall transmit to the President and to the Congress preliminary reports of the studies and investigations carried on by it, and by the departments and agencies represented thereon, together with the findings and recommendations of the committee, and shall submit to the President and to the Congress as soon as practicable thereafter, during or prior to the termination of the Seventy-sixth Congress, further and final reports of the studies and investigations carried out pursuant to this resolution, together with the findings and recommendations of the committee.

(b) A majority of the committee shall constitute a quorum, and the powers conferred upon them by this joint resolution may be exercised by a majority vote.

(c) All authority conferred by this joint resolution shall terminate upon the expiration of the Seventy-sixth Congress.

SEC. 5.

For the purpose of this joint resolution the committee, or any subcommittee designated by it, shall be entitled to exercise the same powers and rights as are conferred upon the Securities and Exchange Commission by subsection (c) of section 18 of the Act of August 26, 1935 (49 Stat. 831); and the provisions of subsections (d) and (e) of such section shall

be applicable to all persons summoned by subpoena or otherwise to attend and testify or to produce books, papers, correspondence, memoranda, contracts, agreements, or other records and documents before the committee.

SEC. 6.

(a) There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $500,000, or so much thereof as may be necessary, to carry out the provisions of this joint resolution.

(b) Of the funds authorized to be appropriated under subsection (a), not to exceed $100,000 shall be immediately available for expenditure by the committee in carrying out its functions and not to exceed $400,000 shall be available, as the President shall direct, among the departments and agencies represented on the committee to enable them to carry out their functions under this joint resolution.

Approved, June 16, 1938.

APPENDIX C

PUBLICATIONS OF THE TEMPORARY NATIONAL ECONOMIC COMMITTEE

The list of documents below represents the complete printed record of the Temporary National Economic Committee. A description of each item is contained in *Description of hearings and monographs of the Temporary National Economic Committee,* issued by the Superintendent of Documents, Washington, D.C.

Hearings

Part 1. *Economic prologue.* 25c.
Part 2. *Patents.* 75c.
Part 3. *Patents.* 35c.
Part 4. *Life insurance.* 50c.
Part 5. *Monopolistic practices in industries, development of the beryllium industry.* 75c.
Part 5-A. *Federal Trade Commission report on monopolistic practices in industries.* 15c.
Part 6. *Liquor industry.* 40c.
Part 7. *Milk industry, poultry industry.* 75c.
Part 8. *Problems of the consumer.* 25c.
Part 9. *Savings and investment.* 75c.
Part 10. *Life insurance.* 75c.
Part 10-A. *Life insurance.* 35c.
Part 11. *Construction industry.* 75c.
Part 12. *Industrial insurance.* 75c.
Part 13. *Life insurance.* 75c.
Part 14. *Petroleum industry.* 75c.
Part 14-A. *Petroleum industry.* 75c.
Part 15. *Petroleum industry.* 75c.
Part 15-A. *Petroleum industry.* 35c.
Part 16. *Petroleum industry.* $1.00.
Part 17. *Petroleum industry.* 65c.
Part 17-A. *Petroleum industry.* 30c.
Part 18. *Iron and steel industry.* 30c.
Part 19. *Iron and steel industry.* 35c.
Part 20. *Iron and steel industry.* 35c.
Part 21. *War and prices.* 65c.
Part 22. *Investment banking.* 50c.
Part 23. *Investment banking.* 65c.
Part 24. *Investment banking.* 75c.
Part 25. *Cartels.* $1.50.
Part 26. *Iron and steel industry.* 65c.
Part 27. *Iron and steel industry.* 75c.

Part 28. *Life insurance.* $1.25.

Part 29. *Interstate trade barriers.* 55c.

Part 30. *Technology and concentration of economic power.* $1.75.

Part 31. *Investments, profits, and rates of return for selected industries.* 40c.

Part 31-A. *Supplemental data submitted to the Temporary National Economic Committee.*

Monographs

1. *Price behavior and business policy.* By Saul Nelson and Walter G. Keim. Pp. 419. 45c.
2. *Families and their life insurance.* By Donald H. Davenport and Gerhard A. Gesell. Pp. 168. 25c.
3. *Who pays the taxes?* By Gerhard Colm and Helen Tarasov. Pp. 55. 10c.
4. *Concentration and composition of individual incomes, 1918-1937.* By Adolph J. Goldenthal. Pp. 112. 15c.
5. *Industrial wage rates, labor costs and price policies.* By Douglass V. Brown, Charles A. Myers, John A. Brownell, John T. Dunlop, and Edwin M. Martin. Pp. 172. 25c.
6. *Export prices and export cartels (Webb-Pomerene associations).* By Milton Gilbert and Paul D. Dickens. Pp. 310. 35c.
7. *Measurement of the social performance of business.* By Theodore J. Kreps and Kathryn R. Wright. Pp. 207. 30c.
8. *Toward more housing.* By Peter A. Stone and R. Harold Denton. Pp. 223. 30c.
9. *Taxation of corporate enterprise.* By Clifford J. Hynning and Gerhard Colm. Pp. 216. 60c.
10. *Industrial concentration and tariffs.* By Clifford L. James, Edward C. Welsh, and Gordon Arneson. Pp. 326. 35c.
11. *Bureaucracy and trusteeship in large corporations.* By Marshall E. Dimock and Howard K. Hyde. Pp. 144. 30c.
12. *Profits, productive activities and new investment.* By Martin Taitel. Pp. 188. 35c.
13. *Relative efficiency of large, medium-sized, and small business.* By Federal Trade Commission. Pp. 449. 50c.
14. *Hourly earnings of employees in large and small enterprises.* By Jacob Perlman. Pp. 94. 15c.
15. *Financial characteristics of American manufacturing corporations.* By Charles L. Merwin, Jr., under the supervision of Robert R. Nathan. Pp. 442. 40c.
16. *Antitrust in action.* By Walton Hamilton and Irene Till. Pp. 146. 20c.
17. *Problems of small business.* By John H. Cover, Nathanael H. Engle, Earl D. Strong, Peter R. Nehemkis, Jr., William Saunders, Harold Vatter, and Harold H. Wein. Pp. 412. 40c.
18. *Trade association survey.* By Charles Albert Pearce. Pp. 501. 50c.
19. *Government purchasing—an economic commentary.* By Morris A. Copeland, Clem. C. Linnenberg, Jr., and Dana M. Barbour. Pp. 330. 35c.

20. *Taxation, recovery, and defense.* By H. Dewey Anderson. Pp. 374. 35c.

21. *Competition and monopoly in American industry.* By Dr. Clair Wilcox. Pp. 344. 40c.

22. *Technology in our economy.* By H. Dewey Anderson, Lewis L. Lorwin, John M. Blair, assisted by Ruth Aull. Pp. 313. 35c.

23. *Agriculture and the national economy.* By Albert L. Meyers. Pp. 48. 10c.

24. *Consumer standards.* By Samuel P. Kaidanovsky, assisted by Alice L. Edwards, under general supervision of Donald E. Montgomery. Pp. 433. $1.00.

25. *Recovery plans.* By Arthur Dahlberg, Hon. Robert G. Allen, Hon. Thomas R. Amlie, Hon. Jerry Voorhis, George B. Galloway, Irwin S. Joseph, Joseph M. Lurie, Sterne Morse, and Sam D. Schearer. Pp. 260. 30c.

26. *Economic power and political pressures.* By Donald C. Blaisdell and Jane Greverus. Pp. 222. 25c.

27. *The structure of industry.* By Willard L. Thorp, Walter F. Crowder, and associates. Pp. 759. $1.00.

28. *Study of legal reserve life insurance companies.* By Gerhard A. Gesell and Ernest J. Howe. Pp. 466. 50c.

28-A. *Statement on Life Insurance.* Submitted by five life insurance company officials. Pp. 84. 15c.

29. *The distribution of ownership in the 200 largest nonfinancial corporations.* By Raymond W. Goldsmith, Rexford C. Parmelee, Irwin Friend, James Gorham, and Helene Granby. Pp. 1541. About $2.00.

30. *Survey of shareholdings in 1,710 corporations with securities listed on a national securities exchange.* By Helene Granby, Raymond W. Goldsmith, and Rexford C. Parmelee. Pp. 258. 35c.

31. *Patents and free enterprise.* By Walton Hamilton. Pp. 175. 25c.

32. *Economic standards of government price control.* By Ben W. Lewis, Warren C. Waite, Don S. Anderson, R. K. Froker, Ellery B. Gordon, William Y. Webb, Donald H. Wallace, Aryness Joy, and Edward S. Mason. Pp. 514. 55c.

33. *Geographical differentials in prices of building materials.* By Walter G. Keim and associates. Pp. 459. 55c.

34. *Control of unfair competitive practices through trade practice conference procedure of the Federal Trade Commission.* By the Federal Trade Commission. Pp. 65. 10c.

35. *Large-scale organization in the food industries.* By A. C. Hoffman. Pp. 174. 20c.

36. *Reports of the Federal Trade Commission.* By the Federal Trade Commission. Pp. 275. 35c.

37. *Saving, investment, and national income.* By Oscar L. Altman. Pp. 135. 20c.

38. *A study of the construction and enforcement of the federal antitrust laws.* By Milton Handler. Pp. 100. 15c.

39. *Control of the petroleum industry by major oil companies.* By Roy C. Cook. Pp. 101. 30c.

39-A. *Review and criticism on behalf of Standard Oil Co. (New Jersey) and Sun Oil Co. of monograph no. 39 with rejoinder by monograph author.* By W. S. Farish and J. Howard Pew; rejoinder prepared by Roy C. Cook. Pp. 96. 15c.

40. *Regulation of economic activities in foreign countries.* By Agnes Roman, Louis Domeratsky, Rudolf Callmann, John H. Cover, and Nelson A. Miller. Pp. 177. 20c.

41. *Price discrimination in steel.* By John M. Blair and Arthur Reeside. Pp. 54. 10c.

42. *The basing point problem.* By the Federal Trade Commission. Pp. 151. 30c.

43. *The motion picture industry—a pattern of control.* By Daniel Bertrand, W. Duane Evans, and E. L. Blanchard. Pp. 92. 15c.

Final Reports

Final report and recommendations of the Temporary National Economic Committee. Recommendations of the Committee to the President and the Congress of the United States. Verbatim record of the public sessions of Committee members, containing the statement of the chairman, Senator Joseph C. O'Mahoney, progress report of the executive secretary, Dewey Anderson, statement of Thurman Arnold, Corwin Edwards, W. T. Kelley, James A. Horton, Wayne C. Taylor, Paul C. Truitt, Frank Bane, A. H. Martin, Frederick V. Waugh, Conway P. Coe, Louis H. Bean, Carl C. Taylor, Mordecai Ezekiel, Donald E. Montgomery, Sumner T. Pike, Senator James M. Mead, Isador Lubin, Willis J. Ballinger, Joseph J. O'Connell, final statement of the chairman. A Brief History of the Temporary National Economic Committee. A Financial Statement of the Committee's Operations. Pp. 783. $1.00.

Final report of the executive secretary to the Temporary National Economic Committee on the concentration of economic power in the United States. A staff volume prepared under the direction of Dr. Dewey Anderson, Executive Secretary of the Committee, and Dr. Theodore J. Kreps, Economic Adviser to the Committee, assisted by Ruth Aull. Competition and monopoly in American industry; concentration of production; managed industrial prices; controlled production and sales; trade associations and cartels; technology in our economy; interstate trade barriers; concentration of corporate assets, earnings, and profits; concentration of ownership; concentration of savings; concentrated control of investment policies; investments and the insurance industry; stimulating investment; investment in the housing industry; small business; consumers; fiscal policy and taxation. Pp. 435. 55c.

Final statement of Senator J. C. O'Mahoney, chairman of the Temporary National Economic Committee. Made at the closing public session to consider recommendations, March 11, 1941; presented by Mr. Barkley, April 1, 1941, Pp. 17. 5c.